SERVICE MANUAL
Level 1&2

NOKIA 3110 CLASSIC

RM-237

Transceiver characteristics:

Band: Tri-band phone for EGSM 900/1800/1900MHz

Display: Active TFT color display with 262.144 colors, resolution 128 x 160 pixel

Camera: Integrated: 1.3 Megapixel camera with 8x digital zoom

Operating System: Series 40

Bluetooth

IRDA

FM radio

Connector: mini USB Connector

Memory Card: microSD™

Transceiver with BL-5c Li-Ion battery pack

Talk time	Standby	Note
up to 4h	up to 16,5days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

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CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	03.Jan.2007	Initial draft
Approved	1.0	06.Mrz.2007	Approval
Approved	2.0	16.Mrz.2007	Disassembly/Assembly Hints updated

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1. INTRODUCTION

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist.
If you find any errors or if you have further suggestions, please notify NOKIA using the address below:
mailto:cc-ts-rc.documentation@nokia.com

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti–static workstation and that an anti–static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re–fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on NOKIA Online. Also see ESD Protection Requirements in this Service Manual.

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2. GENERAL REPAIR INFORMATION

In this section the technician will get some general hints how to carry out repairs:

- To familiarize oneself with NOKIA product read the tutorials or user guide on www.nokia.com -->Support--> Phones, by selecting the Phone Model.
- Before starting the repair you must take care of ESD precautions like being in your ESD Protected Area and connecting your wristband.
- Use gloves to avoid corrosion and fingerprints.
- Protect windows and displays with a film to avoid dust and scratches.
- When cleaning the LCD Module any lint-free cloth can be used (e.g. Micro-Fibre cloth).
- When cleaning the pads you have to use a soft cloth/ESD brush and Isopropanol. It is not allowed to use a glass fiber pencil because it scratches the surface and will lead later on to corrosion.
- Mechanical parts (except shielding lids and bent parts), which didn't repair the failure, can be reused, if they are not soldered.
- When removing the shielding lids make sure to replace them with new ones, otherwise the high-frequency leakage can have an influence on the device.
- Always use original NOKIA spare parts.
- Check the soldering joints of the parts, which are concerned regarding the indicated error (e.g. soldered connectors or switches) and resolder them if necessary (Level 2 only).
- Remove redundant soldering flux after repair.
- Meet the torque requirements when assembling the unit (see also the document "torques for transceiver assembly" on NOKIA Partner Web Site/NOKIA Online).
- Always use your own equipment for testing where you are sure that it works. E.g. if the customer complains about charger function, please test the phone with your own charger to be sure if phone or charger causes the malfunction.
- A SIM card is needed for all GoNoGo tests.
- When doing the fault log entries, always note the Item code, which caused the malfunction. Also, fill in the appropriate part code from the assembly, if needed.
- Please be aware that some malfunctions could be software related and solved by an update.

- There are several documents available on NOL, which have to be followed:
-
- First, take care for the latest content pages of Service Bulletins, which are always available for each folder on NOKIA Online. This is also important to recognize, if existing documents have become invalid.
-
- The service level indicator at the bottom of each document tells the appropriate destination.

Downloads > Support Library >

1. Instructions
2. General Service Bulletins
3. Product related documents
4. Spare Part Service Bulletins
5. Service Tools Service Bulletins
6. Common Software Service Bulletins
   etc,...

Use General SB-217 as a reference or overview.

Please also check NOKIA Online (NOL) for latest news and files on a regular basis.

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3. PATHFINDER FOR WORKSHOP STAFF

This is the NOL page (NOKIA Online) which is currently available in Europa, Middle East and Africa only!

In addition to the information in this Service Manual, there are several instructions and information, which have to be followed. Main documentation database is **NOKIA Online** with the purpose of serving different multimedia content, like video clips or interactive tutorials.

It is mandatory to watch for newest technical and organizational information on a daily basis to be updated as required (see **"Latest files in Support Library"**). Every new information has to be processed and implemented as soon as possible.
When logged into NOL you can also find needed information in different folder like:

Support Library → **Phones** →
Service Manuals
Service Bulletins
Software
Repair Information

Level 1&2 e-learning (former NOKIA CarePoint) on NOKIA Online

Former NOKIA CarePoint content, such as →	• **Online Troubleshooting** • **Product information** • **Videos – Disassembly/Assembly** →	can be found on **NOKIA Online**

Nokia 1100 Technical Training - Microsoft Internet Explorer provided by NOKIA
NOKIA
CONNECTING PEOPLE
Nokia 1100 Technical Training
Help
Site map
Glossary
Close
Home
Overview & Guides
Disassembly & Assembly
Troubleshooting
Nokia 1100 Technical Training
This training offers a quick overview of the Nokia 1100 phone and support for how to repair and use the phone.
Overview & Guides
Disassembly & Assembly
Troubleshooting
Get a quick overview of the phone and how to use it.
Learn how to remove and reassemble the mechanical parts of the phone.
Fixes for most common problems with the Nokia phone.
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NOKIA Online
↓
Care Services
↓
Training
↓
Phone Models

Level 1&2 e-learning courses offer a quick overview of the NOKIA phone and support for how to repair and use the phone:

Overview & Guides	Disassembly & Assembly	Troubleshooting
Basic information about the phone, features and technologies	Instructions how to disassemble and assemble the phone	Step-by-step instructions on how to locate and repair the most common problems with the phone

To reduce the server traffic it is recommended to download newest version of huge files like videos, Phoenix packages or Service Manuals only once and distribute it internally for further use.

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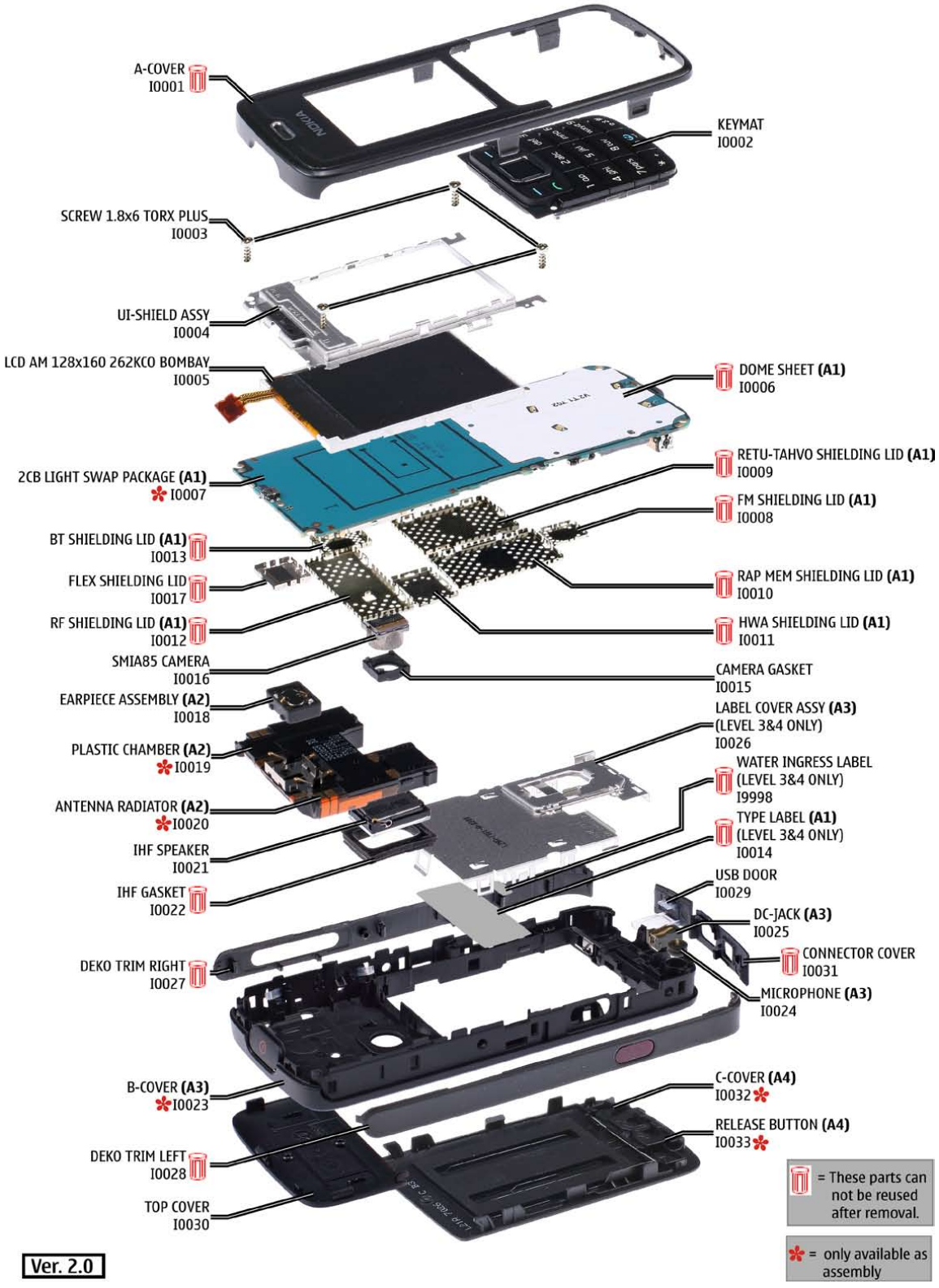
4. EXPLODED VIEW

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

3110c RM-237 EXPLODED VIEW



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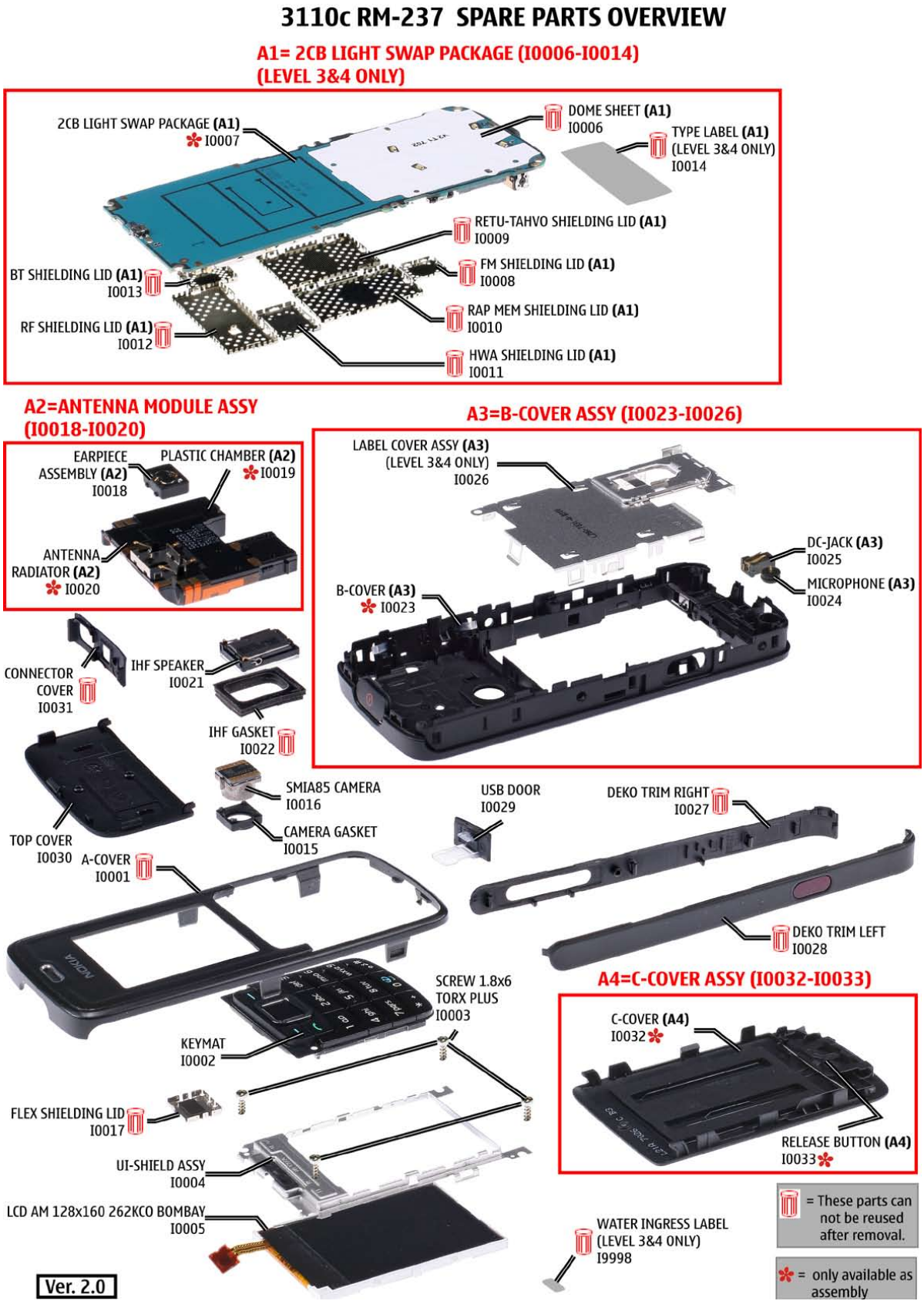
5. SPARE PARTS OVERVIEW

3110c RM-237 SPARE PARTS OVERVIEW



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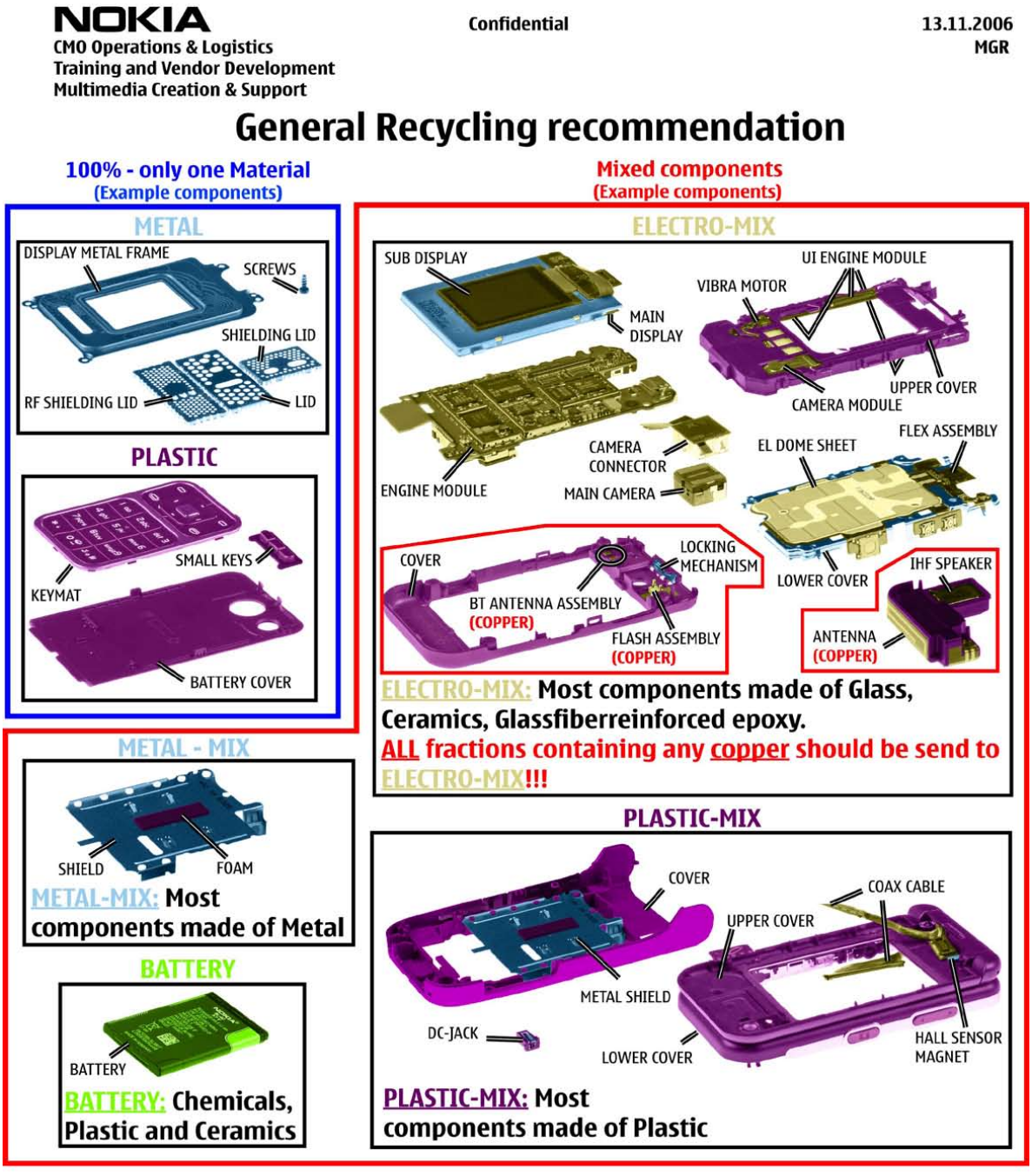
6. GENERAL RECYCLING RECOMMENDATION



Some of these options can be utilized directly and some need pretreatment as for instance dismantling, grinding, milling, etc.
For sorting the waste into fractions for recycling, your recycler will offer you more specific information, but a GENERAL RULE is:
Elecronic Equipment: There are recyclers that can process this "multimaterial" for high recycling yields.
Metals: Fractions containing metals must always be collected and sent for (metal) material recycling.
Plastics: Pure plastics fractions (i.e. covers) can be sent for (plastics) materials recycling.
Mixed Plastic/Metals: A metal fraction contaminated with plastics does not represent a problem for metal recycling/recovery whereas recycling/recovery of plastics is generally sensitive for contamination by other materials.

ELECTRO METAL PLASTIC BATTERY

Ver. 3.0

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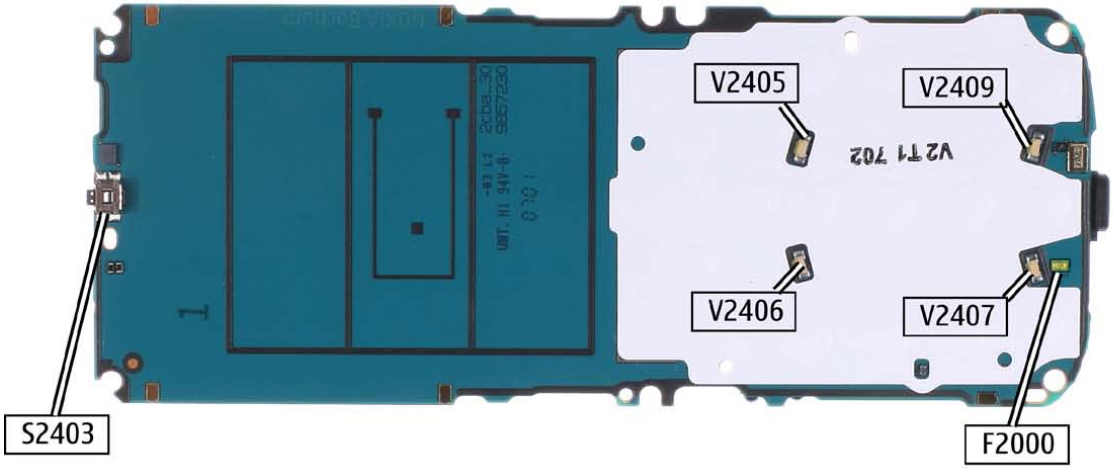
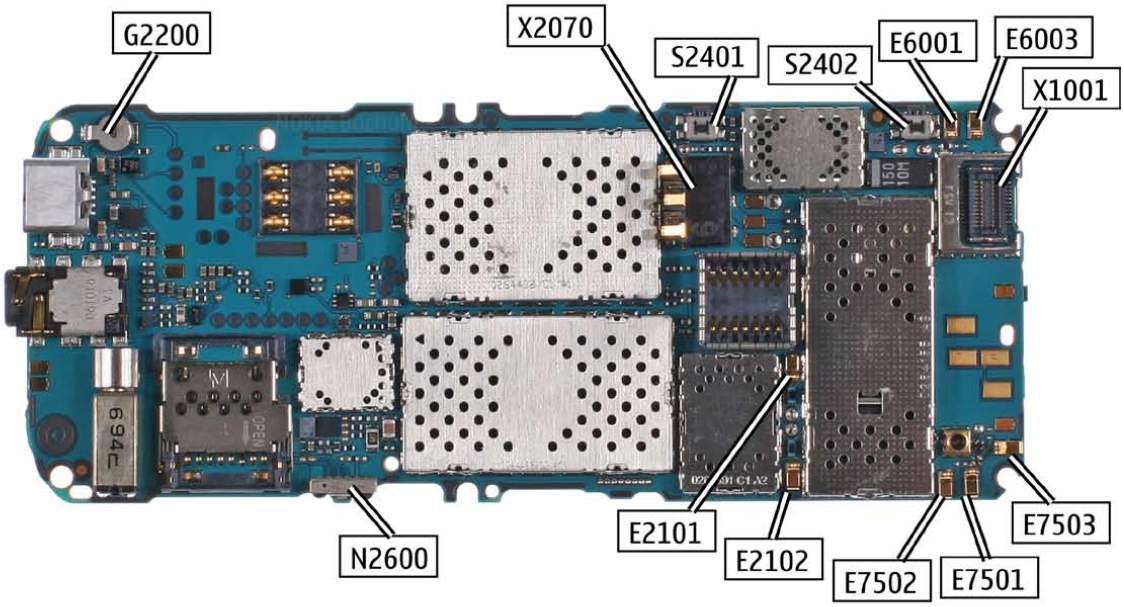
7. LEVEL 2 SOLDER COMPONENTS

3110c RM-237 Components overview

Solder components only for LEVEL 2





Ver. 1.0

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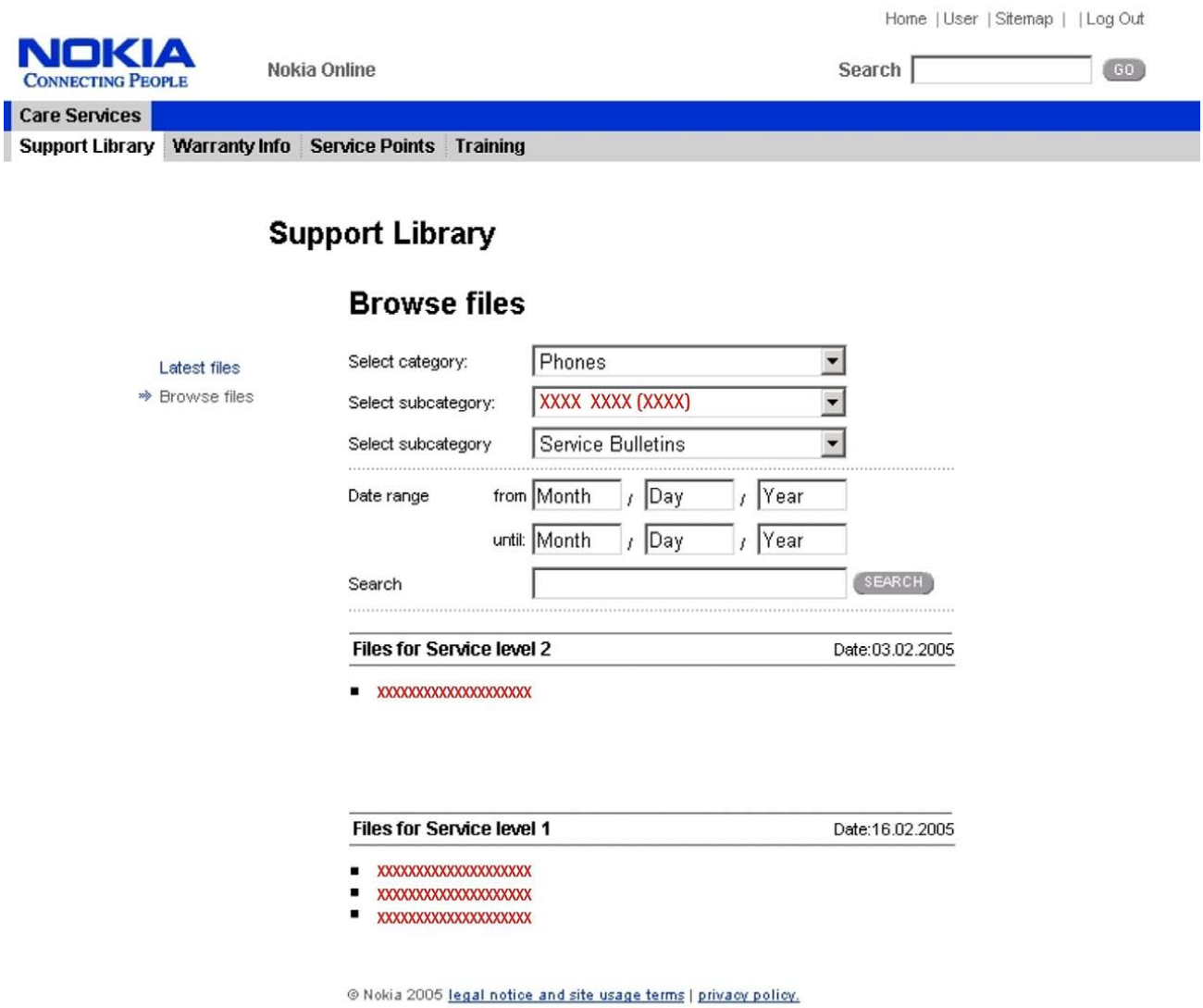
8. NOKIA ONLINE (NOL)

NOL is the database where you can find the latest corresponding Service Bulletins (spare parts, SWAP units and service tools).

This will ensure, that you are using up-to-date order codes only.

Therefore Service Bulletins have to be checked from NOL on daily basis.



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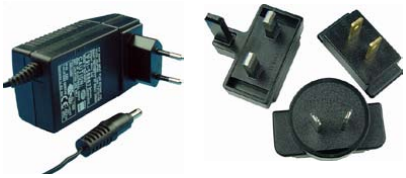
9. SERVICE TOOLS

	FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.
	**ACF-8** Universal Power Supply is used to power FLS-4S.
	Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.
	Internal Battery BL-5c Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.
	SS-45 Camera removal tool. One side is for disassembly, the other side for assembly.
	DKE-2 Service Cable to connect the PC with the mini USB connector.

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	RJ-148 Soldering Jig
	Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).
	0772040 NMP Standard Toolkit (V2) For more informations refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "**Recommended service equipment**" document on NOKIA Online.

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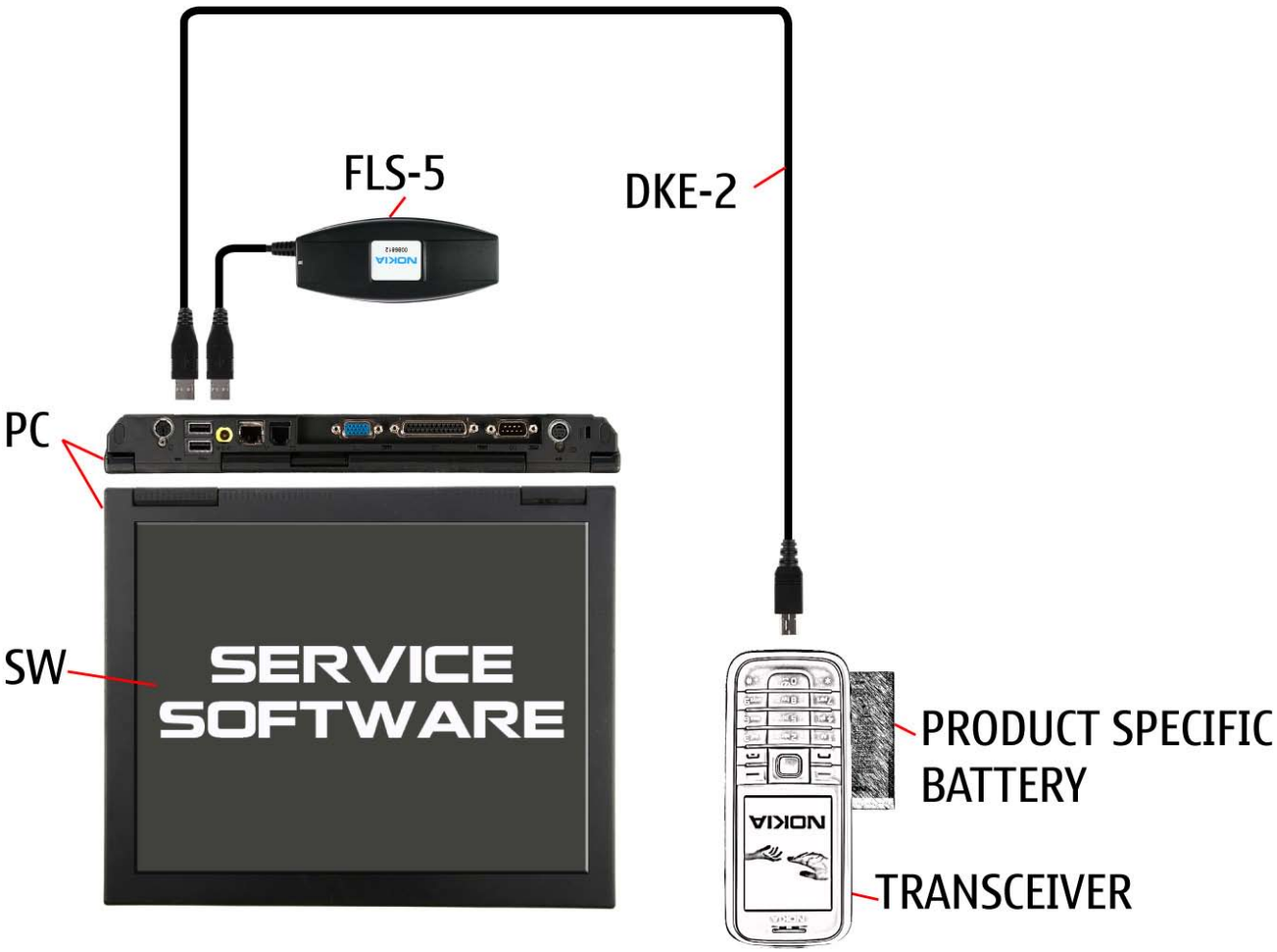
10.SW-UPDATE

Flash Concept – (Point of Sales)

To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on
NOKIA Online.



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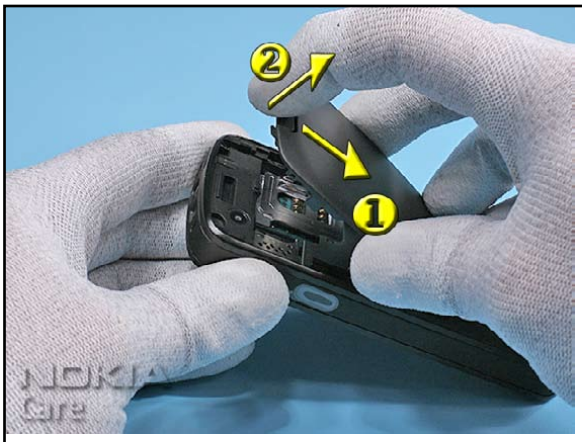
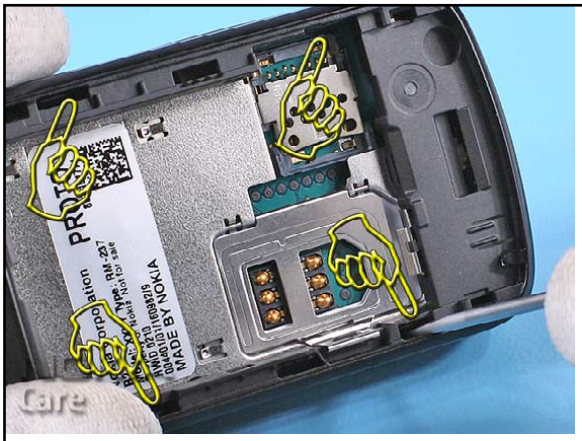
11. DISASSEMBLY INSTRUCTION

1. Needed tools: A Torx driver, a Torx Plus© size 6 bit, a torque driver, the SS-93 opening tool, a dental pick, flat bladed screwdriver, metal tweezers, the SS-45 camera opening tool, the SRT-6 and the DC plug.



2. Unlock and open the C-COVER ASSEMBLY.

3. First unlock the A-COVER with the SRT-6 at the lower side and lift it a bit.



4. Release the marked clips with the flat bladed screwdriver...

5. ...and then, carefully separate the A-COVER from the unit by slighting the SRT-6 along the edges of the cover.

6. Remove the Keymat and discard the A-COVER.

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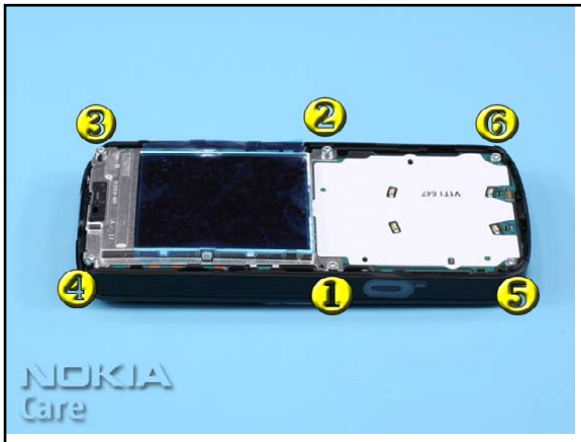
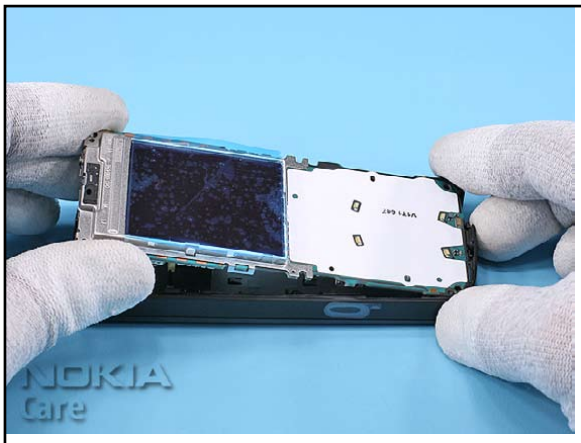
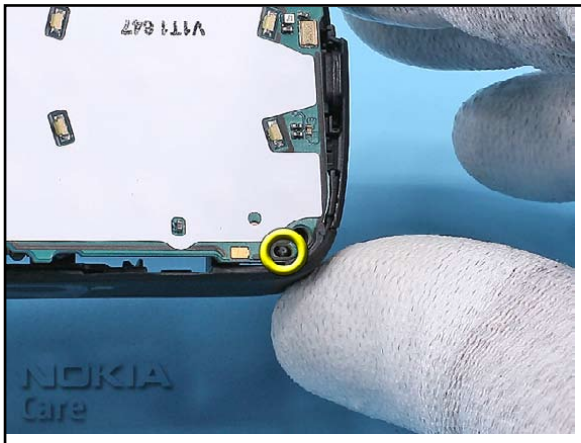


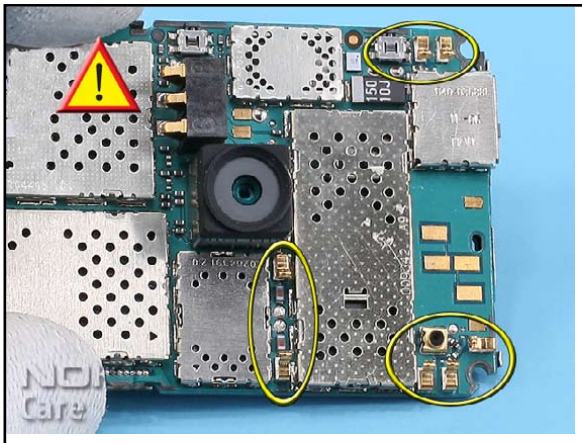
7. Unlock the screws in the order shown.



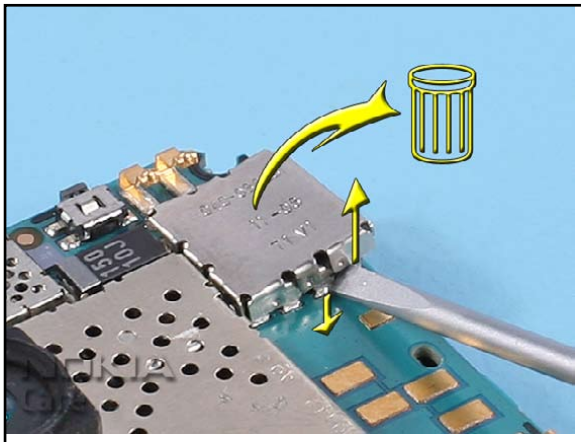
8. Lift the Engine Module a bit as shown.



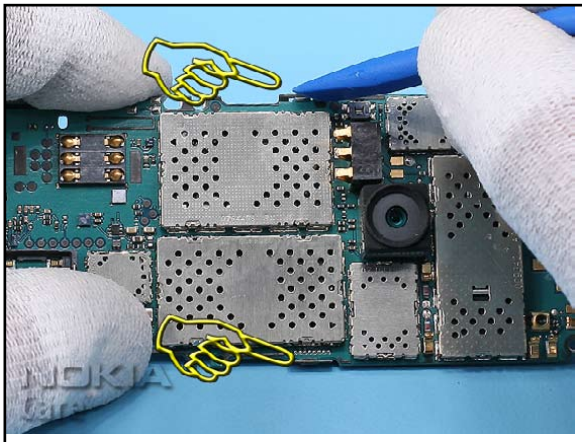
9. Gently, remove the ENGINE MODULE. Avoid damaging the guide pin of the B-COVER.



10. Take a special care to the spring contacts on the ENGINE MODULE.



11. Use a flat bladed screwdriver to open the FLEX SHIELDING LID. Do not touch the spring contacts with the tool. Discard the FLEX SHIELDING LID after removal.



12. Unlock the UI-SHIELD ASSY.

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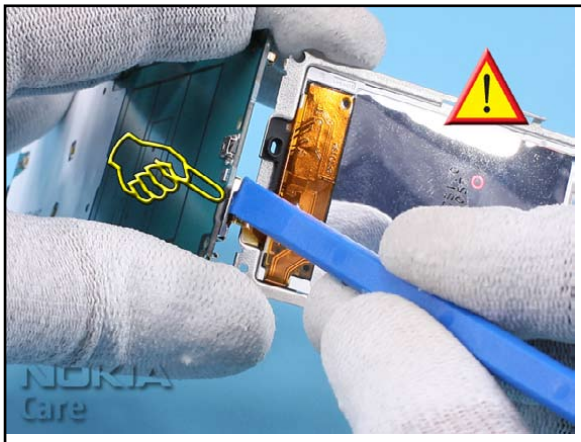
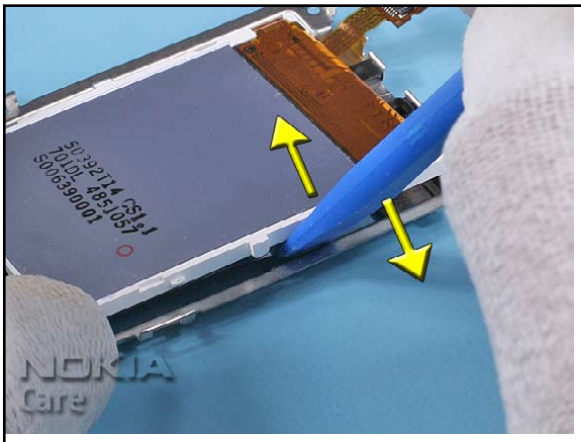
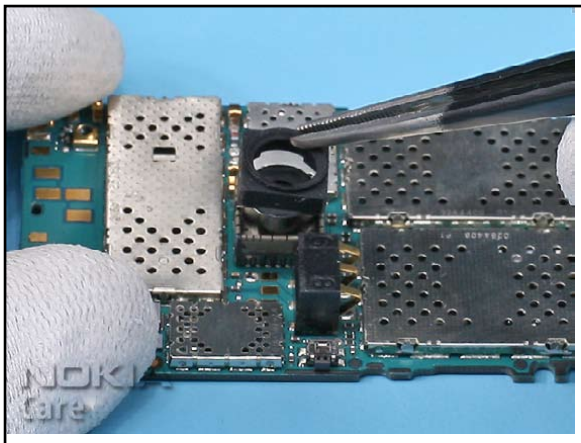


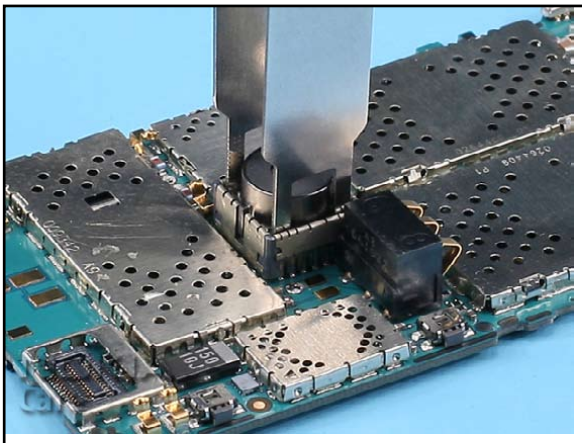
13. Turn the UI-SHIELD ASSY to the position shown and carefully open the LCD connector.



14. Unlock and remove the LCD from the UI-SHIELD ASSY.

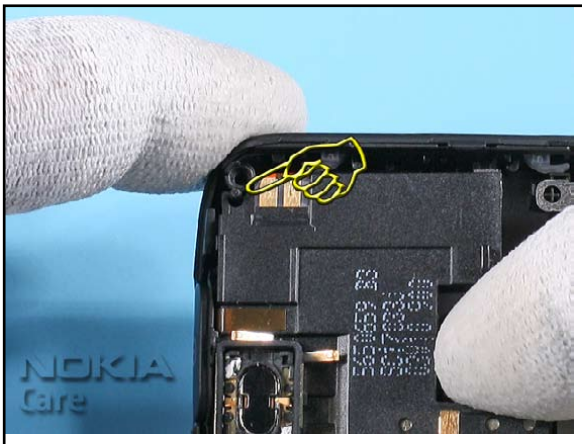


15. Remove the CAMERA GASKET.



16. Remove the CAMERA with the SS-45.

17. Remove the USB DOOR.



18. Take care to the guide pin when removing the ANTENNA MODULE ASSY.

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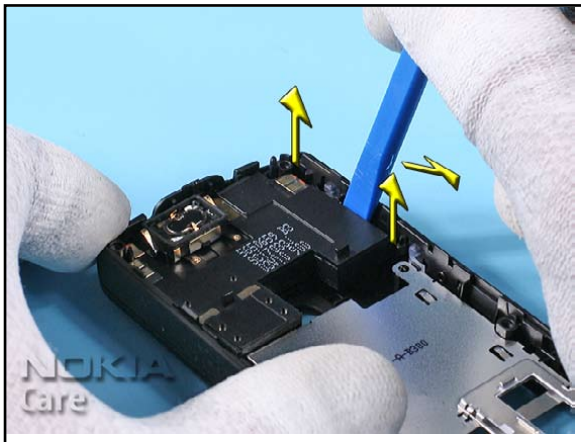
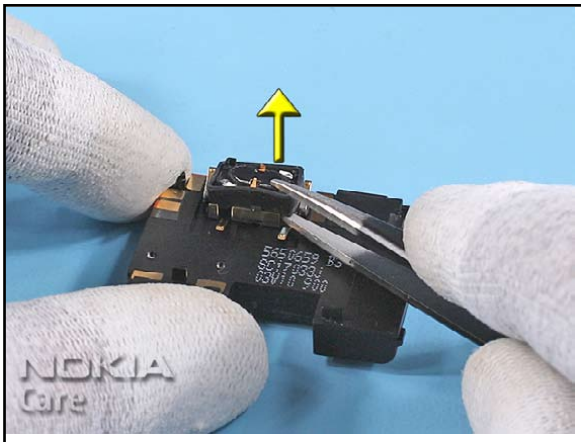
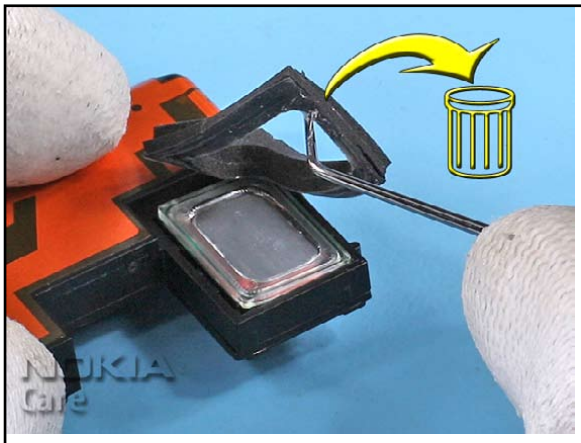


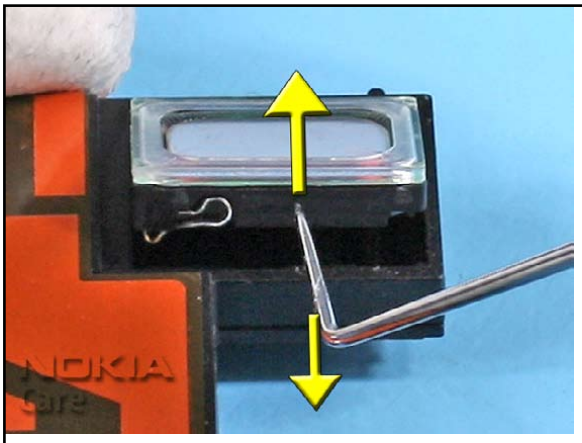
19. Use the SS-93 as a lever to remove the ANTENNA MODULE ASSY.



20. Remove the EARPIECE ASSEMBLY.

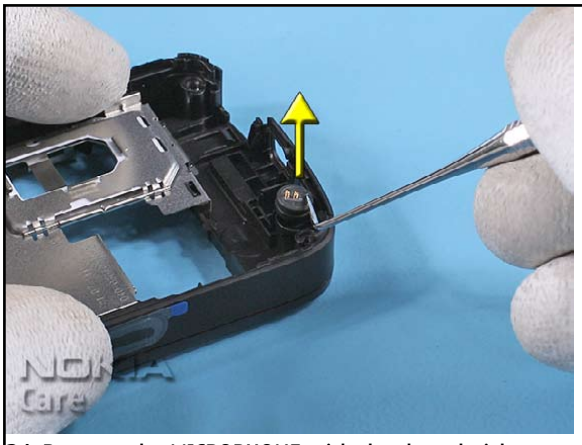


21. Use the dental pick to remove the IHF GASKET. Discard the IHF GASKET after removal.



22. Lift the IHF SPEAKER from its guidance and remove it.

23. Use the DC plug to remove the DC-JACK.



24. Remove the MICROPHONE with the dental pick.

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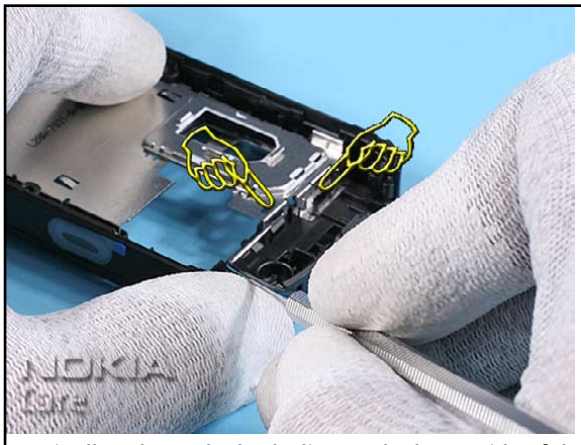
25. Open the SIM door...

26. ...and unlock the LABEL COVER ASSY beginning at the shown side.

27. Turn the B-COVER and release the three snaps in front of SIM door.

28. Do the same on the other side.



29. Finally, release the both clips on the lower side of the B-COVER and remove the LABEL COVER ASSY.

30. Release the clips of the DECO TRIM RIGHT...

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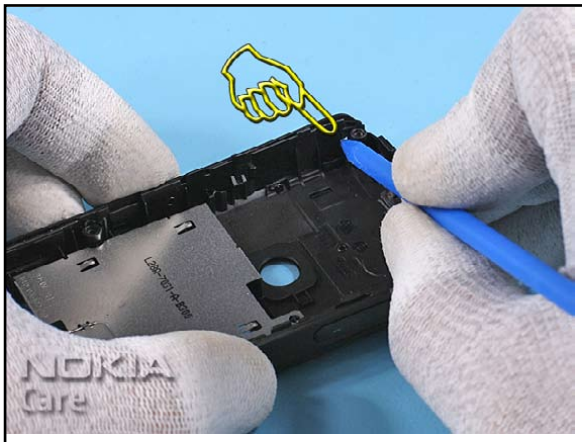
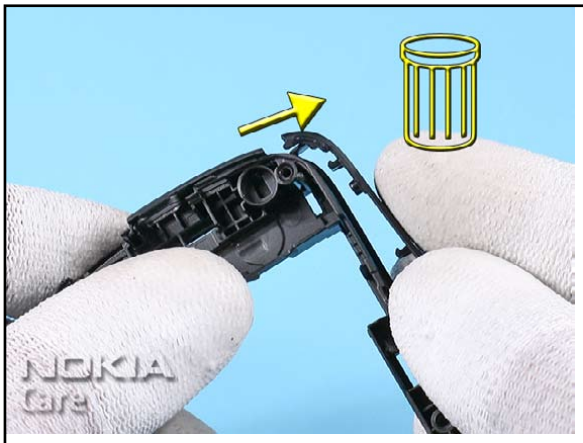
31. ...and discard it after removal.

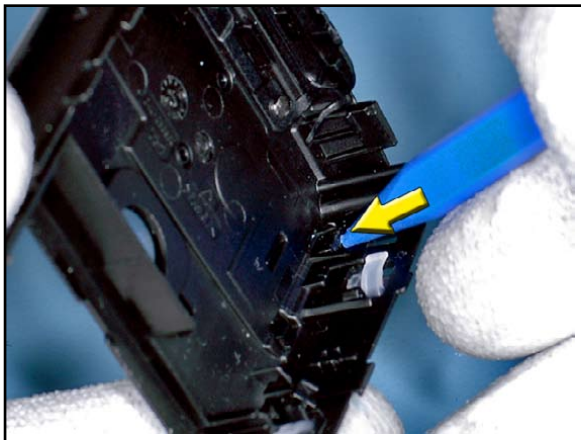


32. Release the clips of the DECO TRIM LEFT.

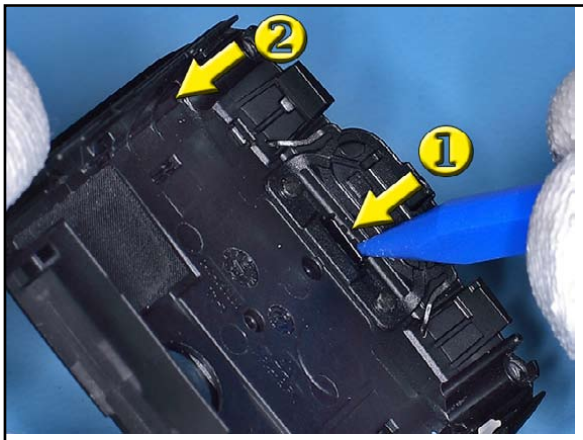
33. Separate the other side of the DECO TRIM from the B-COVER...



34. ...and discard it after removal.



35. Unlock the first snap of the TOP COVER with the SS-93.



36. Now unlock the other two snaps in the order shown.

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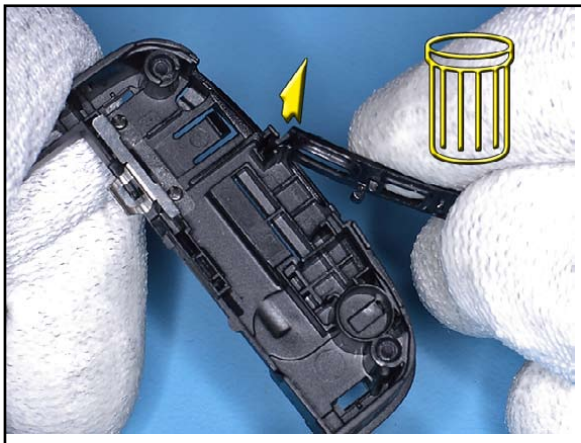
37. Remove the TOP COVER from the B-COVER.

38. Release the snap from the CONNECTOR in the edge with the dental tool.

39. Now unlock the second snap ...



40. ...and remove the CONNECTOR COVER by lifting it up.

41. The disassembly procedure is now complied.

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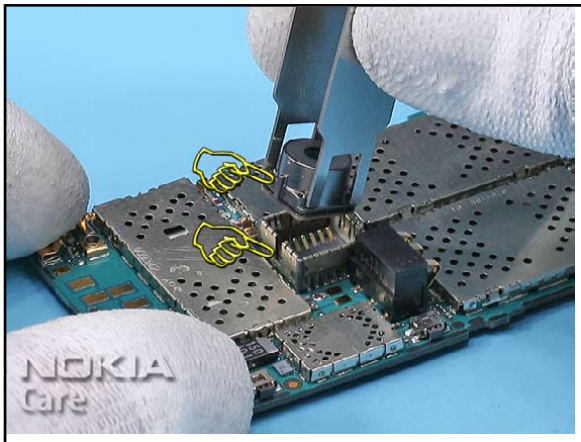
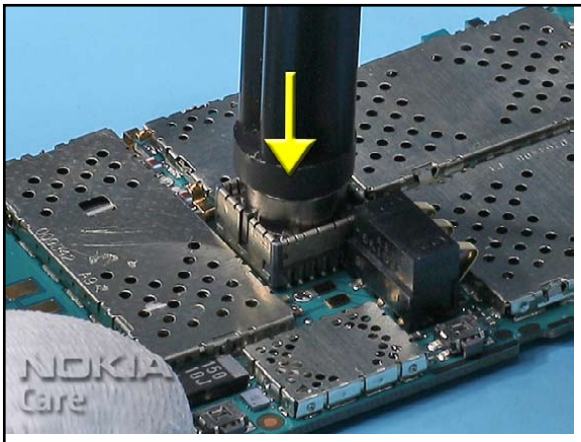
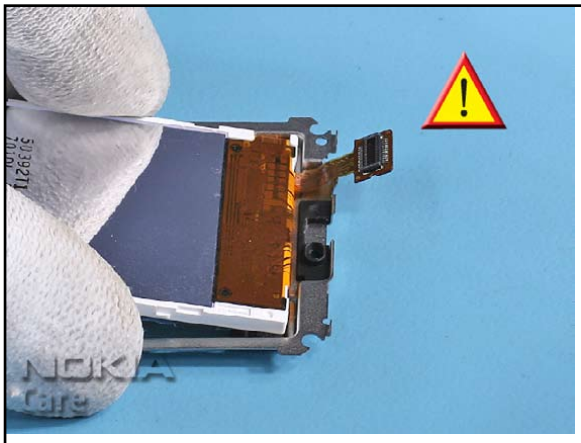
12. ASSEMBLY HINTS



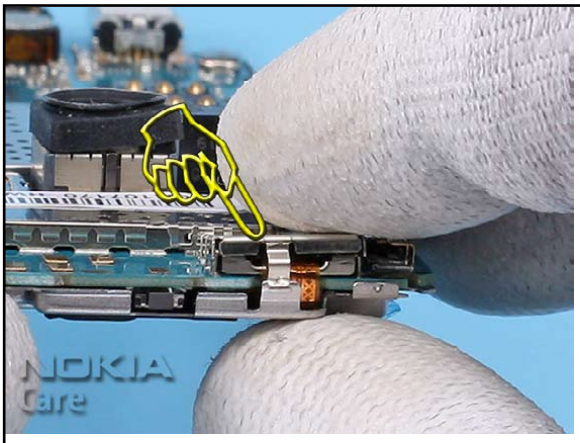
1. Note the right position of the guide when inserting the CAMERA.



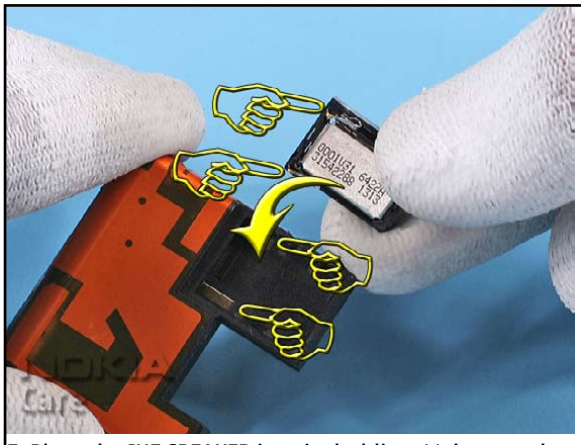
2. Turn the SS-45 and gently press the CAMERA in to place.



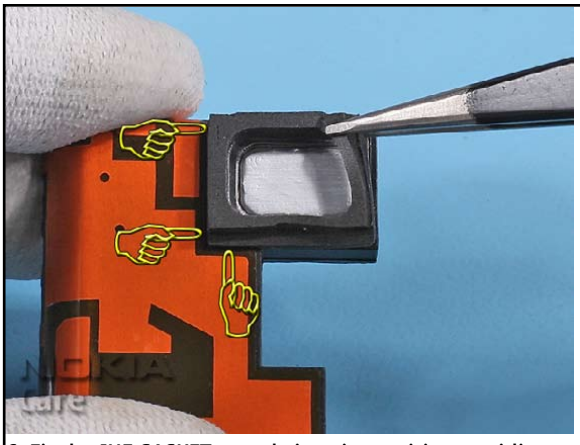
3. Place the LCD into the UI-SHIELD ASSY. Note the right position of the LCD flex.



4. Always use a new FLEX SHIELDING LID. Note the right position when assembling.



5. Place the IHF SPEAKER into its holding. Make sure that the spring contacts are in the right place.



6. Fit the IHF GASKET exactly into its position avoiding touching the IHF SPEAKER.

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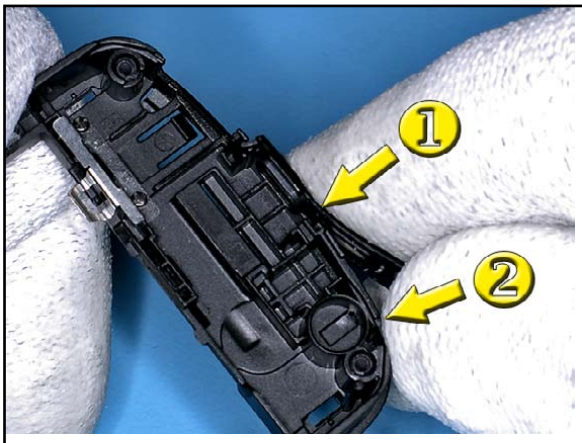
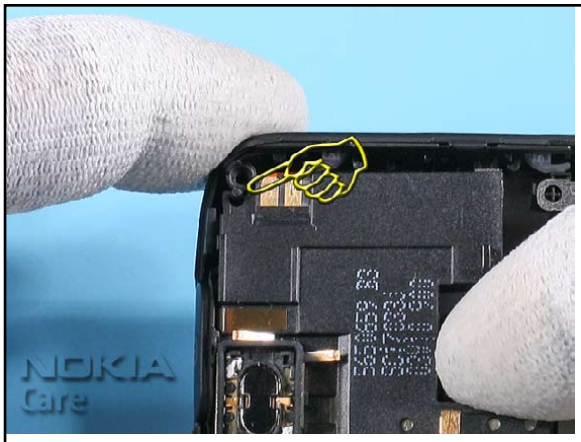
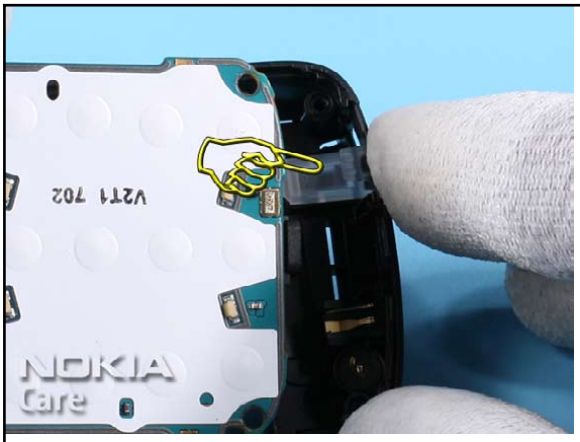
7. First slide the CONNECTOR COVER from top into the guiding from the B-COVER.



8. Bent the CONNECTOR COVER a bit and close the snaps in the order shown.



9. Note the guide pin of the B-COVER when inserting the ANTENNA MODULE.



10. Hold the USB DOOR in place while fitting the ENGINE MODULE...

11. Take care to the guide pin of the B-COVER.

12. First, bend back the power key a bit to avoid damaging of the power switch and then place the ENGINE MODULE onto the B-COVER.

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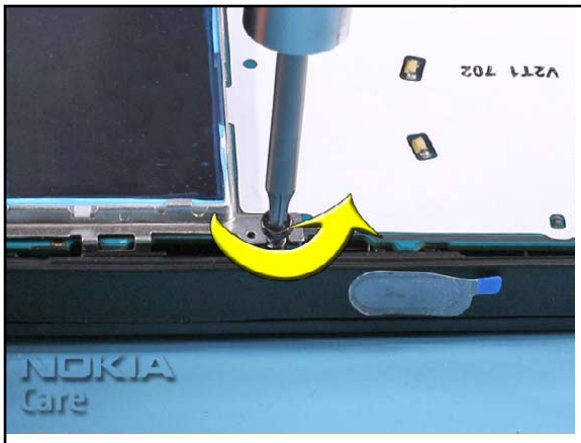
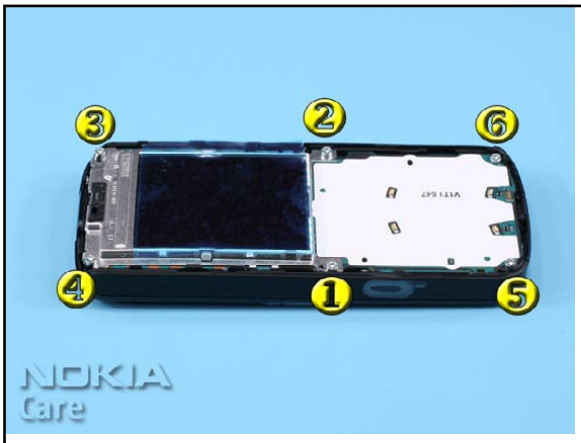


13. To avoid damaging the plastic threads, first turn the screws slightly left to engage the thread...



14. ...and then tighten the screws to the torque of 21Ncm in the order shown.

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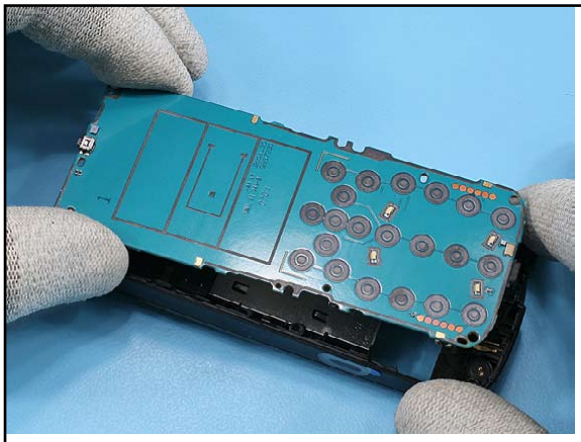
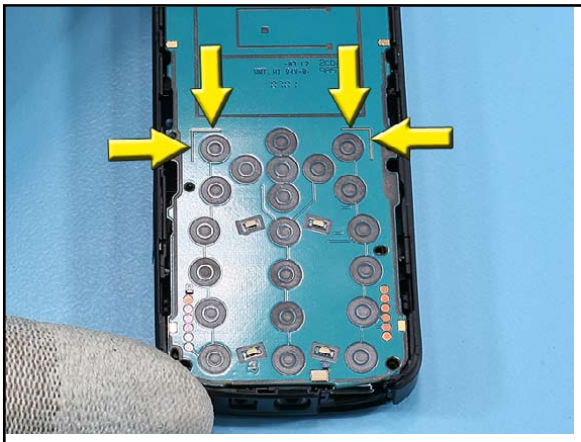
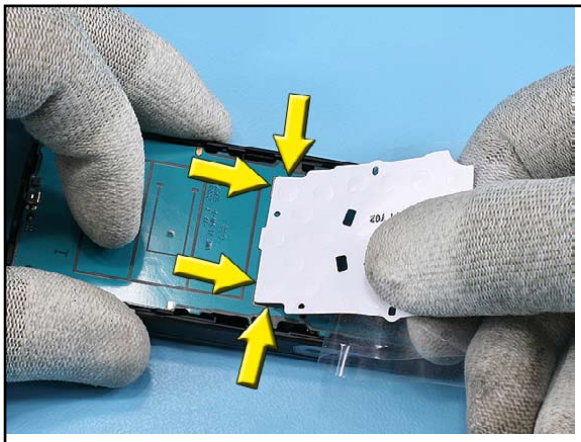
13. DOME SHEET ALIGNMENT INSTRUCTION



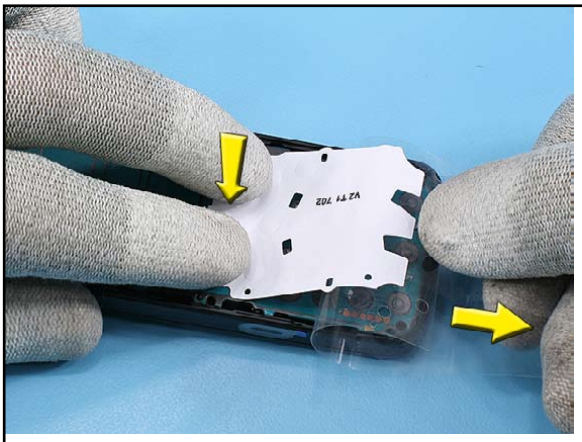
1. Place the 2CB ENGINE MODULE onto the B-COVER ASSY.



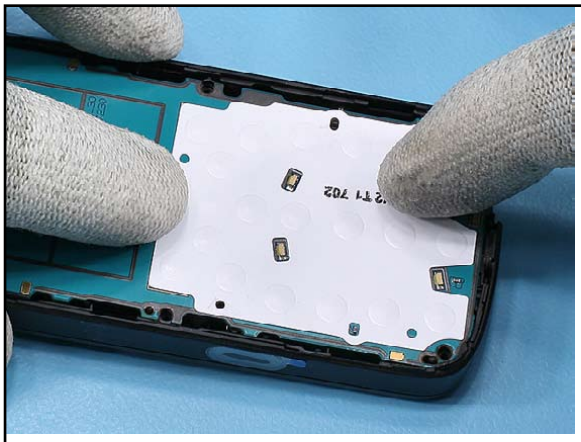
2. Find the two corner markers. Check if the surface of the 2CB ENGINE MODULE is clean and no residue is remaining.



3. Use a new DOME SHEET and flip back a part of the protective film. Align the DOME SHEET with the corner markings and ...



4. ... affix it whilst removing the protective film.



5. Press the DOME SHEET evenly onto the 2CB ENGINE MODULE to make sure that it is glued correctly.

6. Check the correct placement and be sure that the two holes in the DOME SHEET are aligned with ones in the 2CB ENGINE MODULE.

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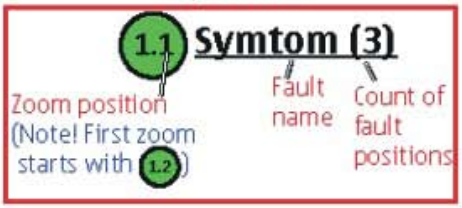
14. LEGEND FOR QUICK TROUBLE SHOOTER

Legend for Quick Trouble Shooter

This legend is valid for all parts of the Quick Trouble Shooter

Follow the steps until the problem is solved. If this doesn´t help, you are not authorized to go forward.

	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components can be replaced. If additionally "**=CHANGE ASSY**" appears, then change the whole assembly (e.g. A4=D-COVER ASSEMBLY).
	Cloth usage: Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	ESD Brush usage: Check contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Explanation 

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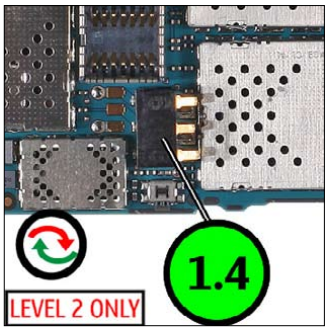
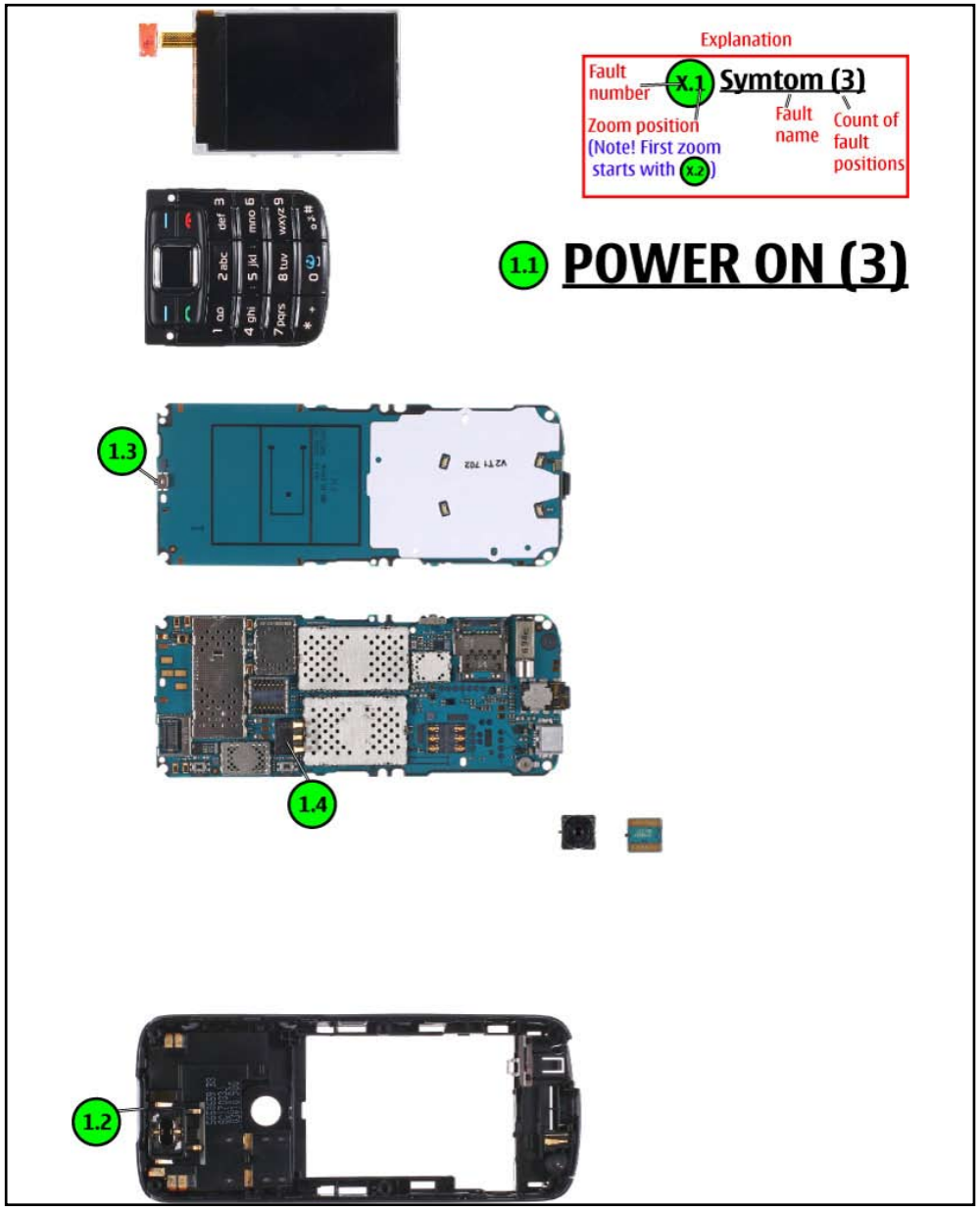
15. QUICK TROUBLE SHOOTER - POWER ON





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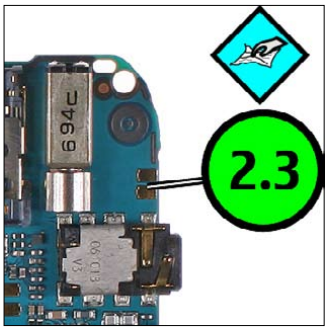
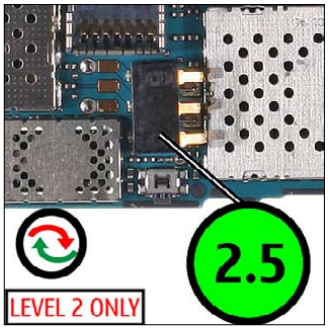
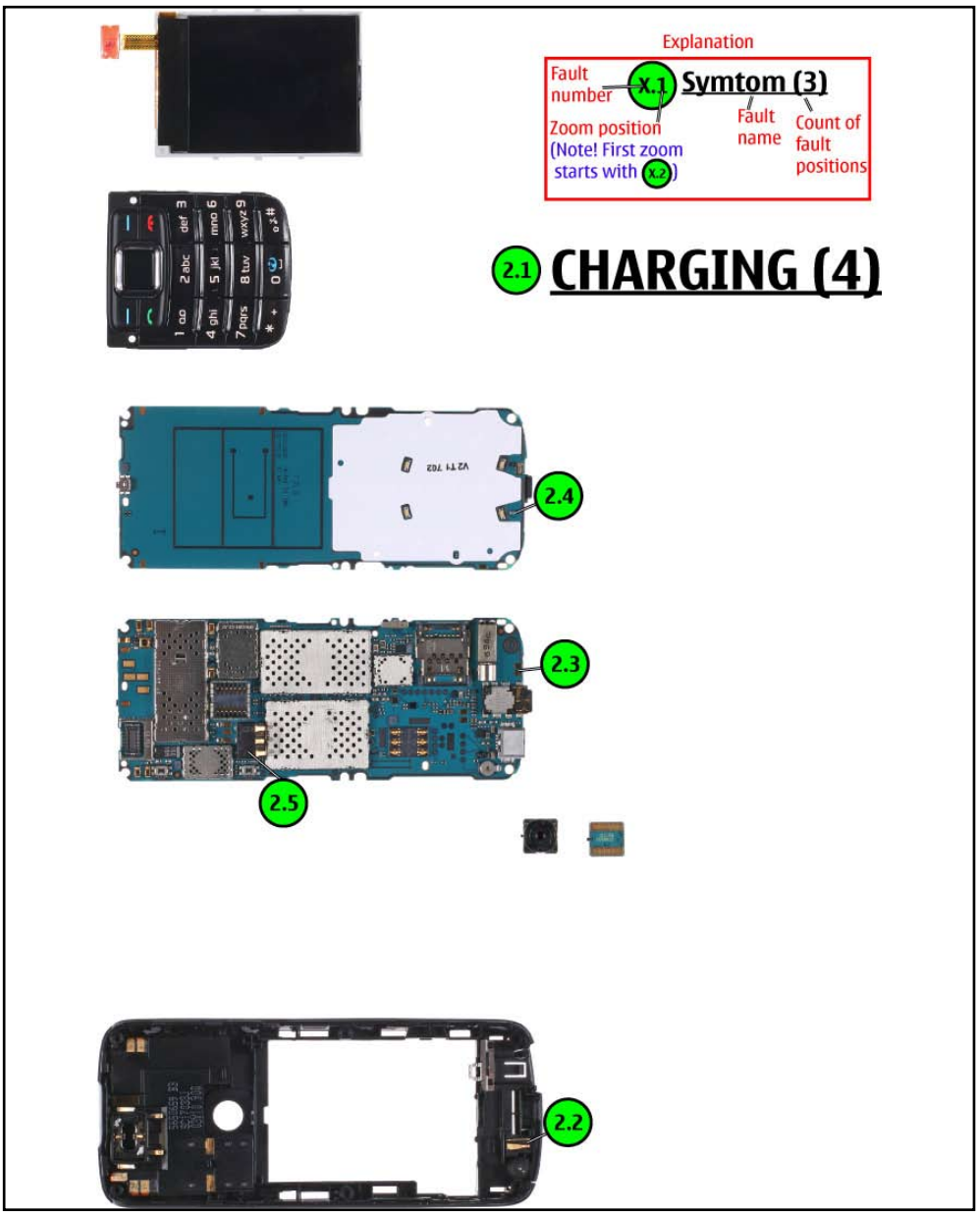
16. QUICK TROUBLE SHOOTER - CHARGING







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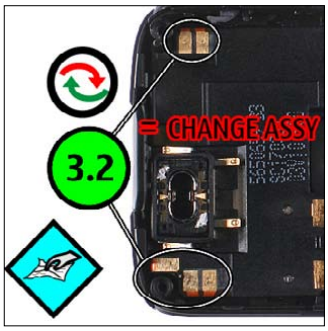
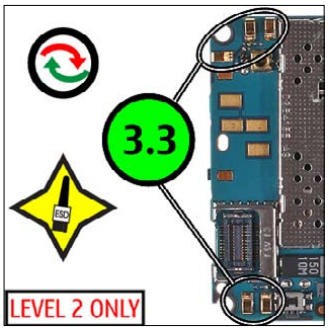
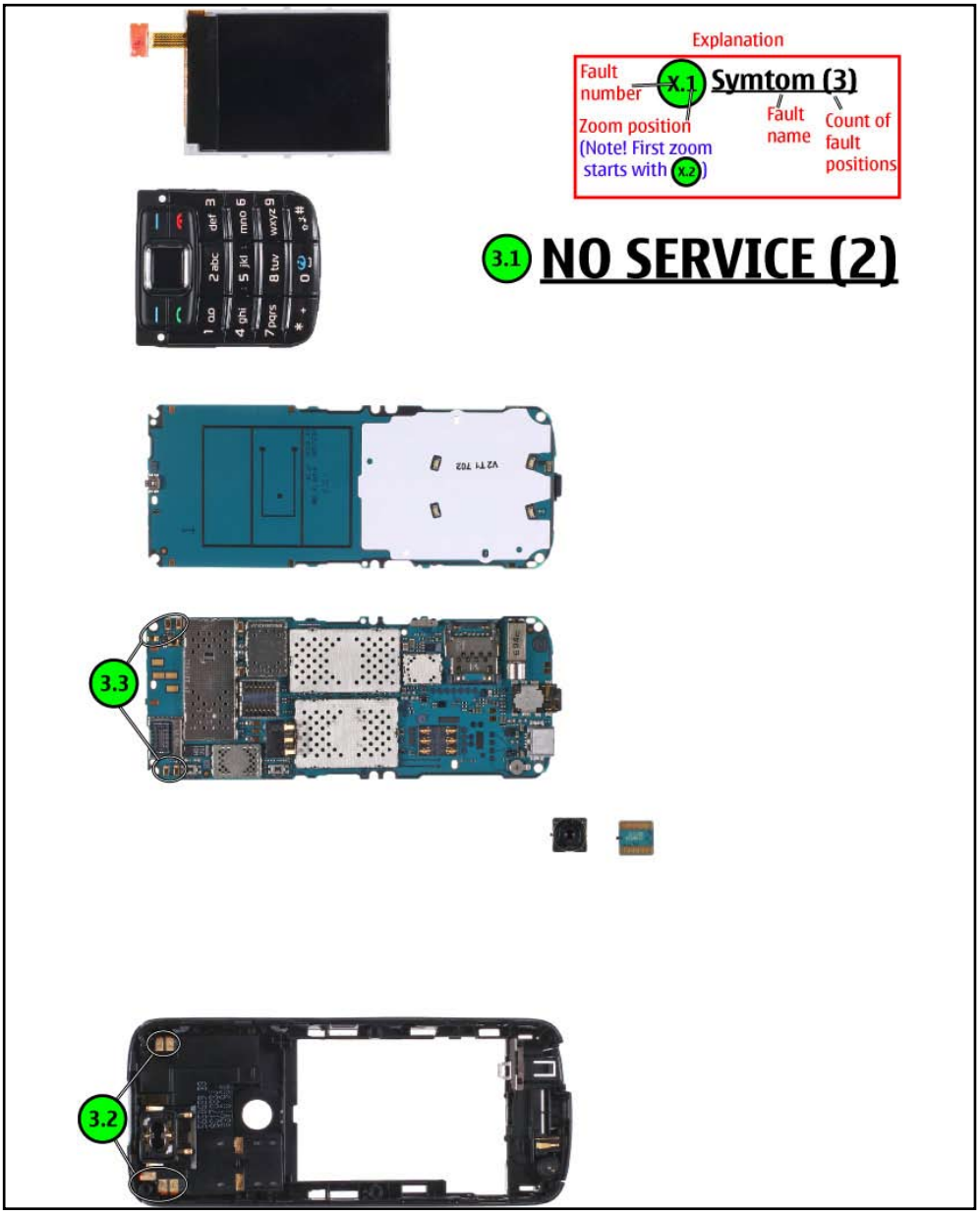
17. QUICK TROUBLE SHOOTER - NO SERVICE







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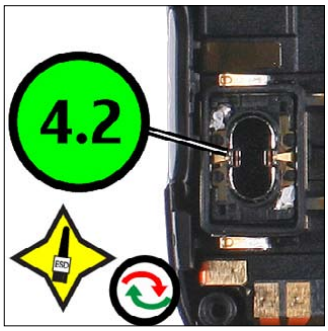
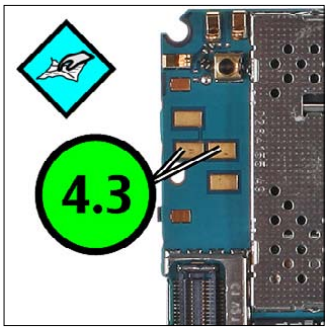
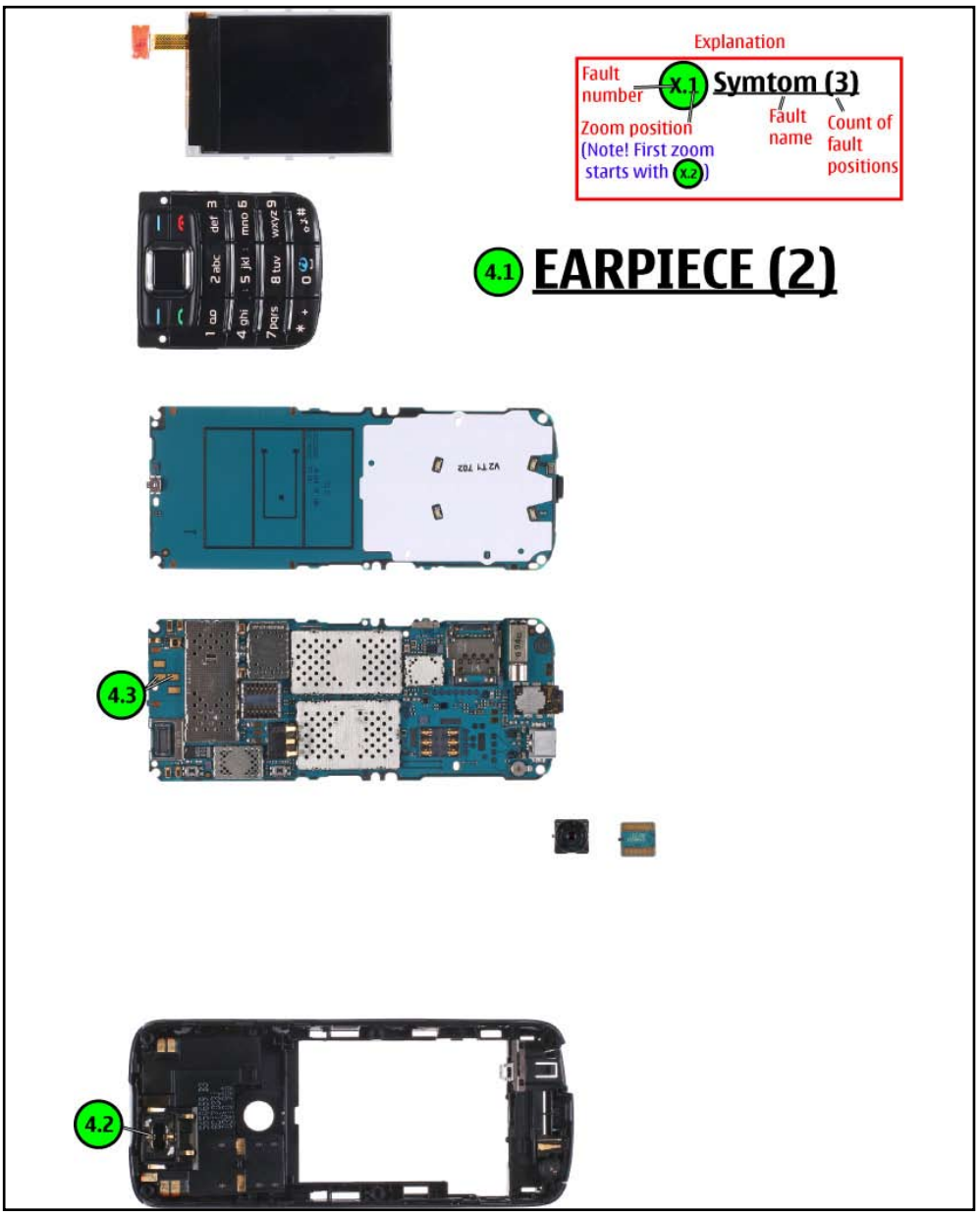
18. QUICK TROUBLE SHOOTER - EARPIECE







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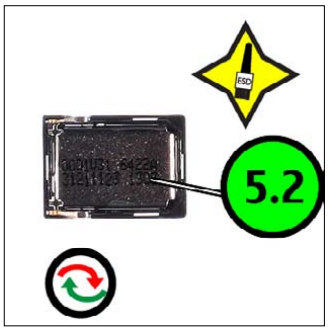
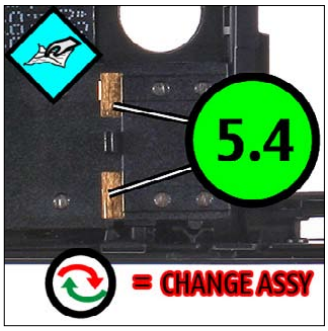
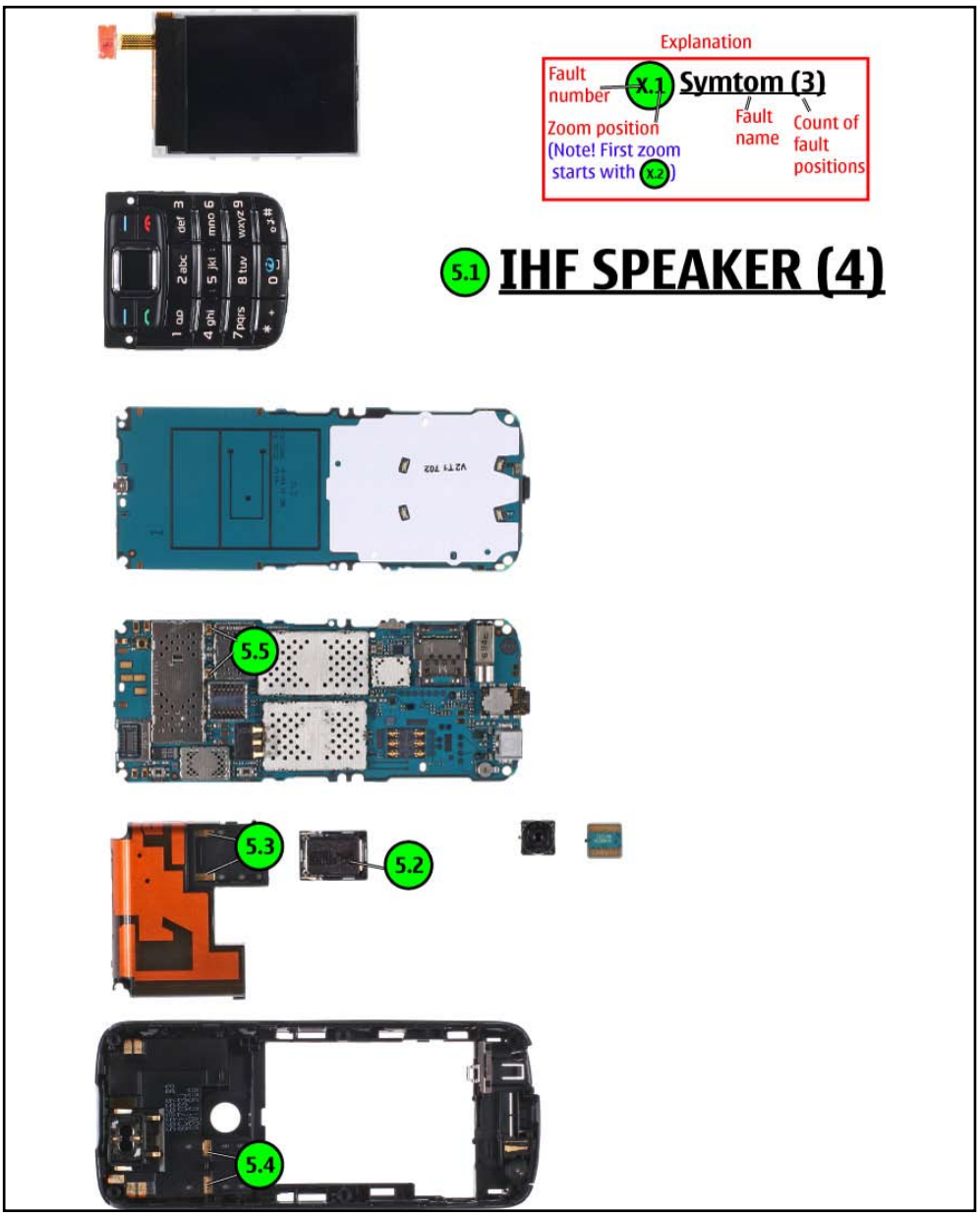
19. QUICK TROUBLE SHOOTER - IHF SPEAKER







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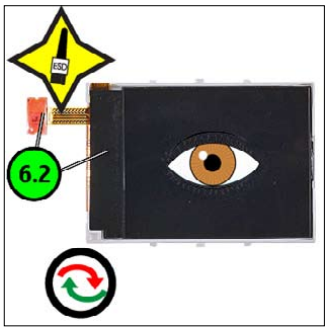
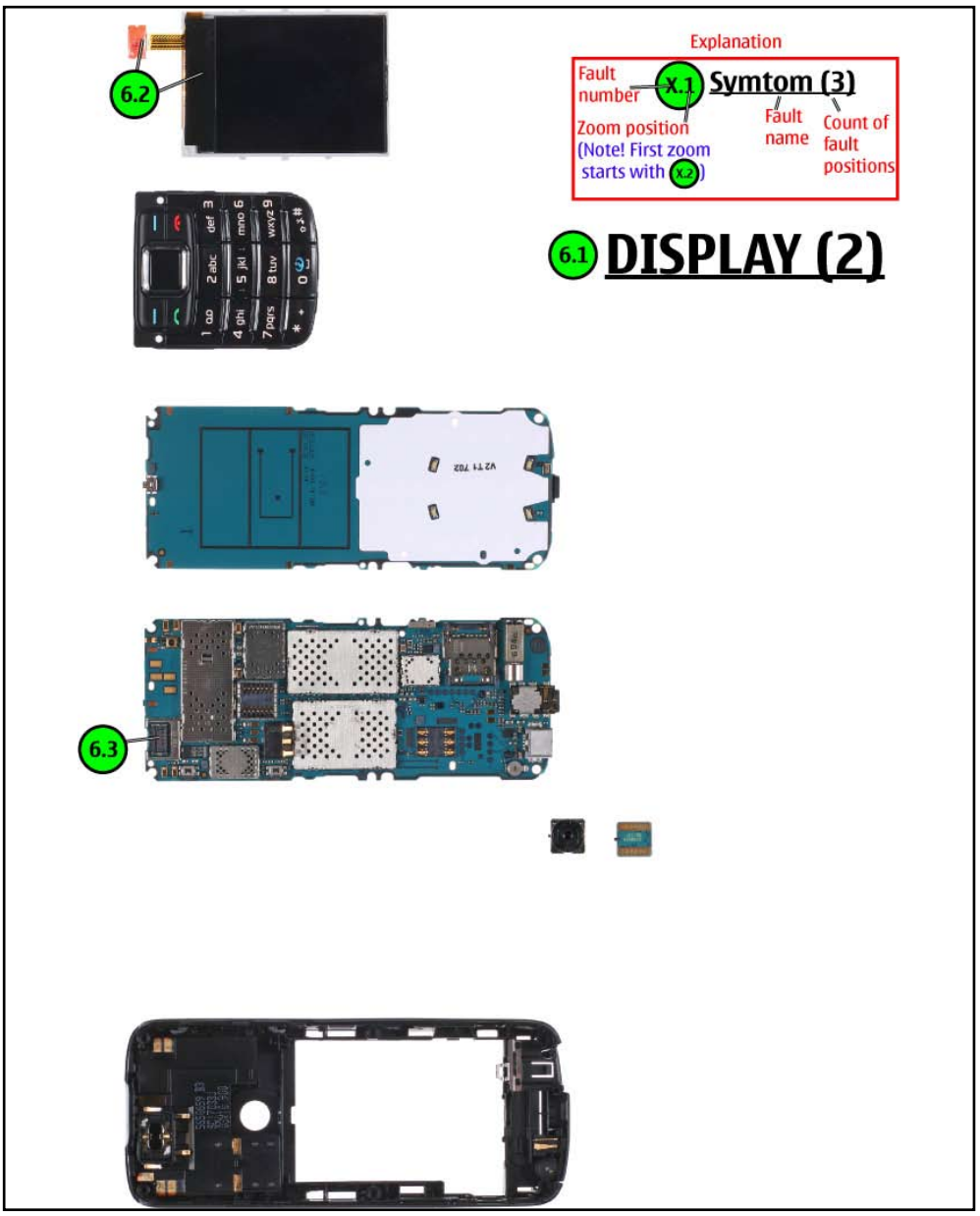
20. QUICK TROUBLE SHOOTER - DISPLAY





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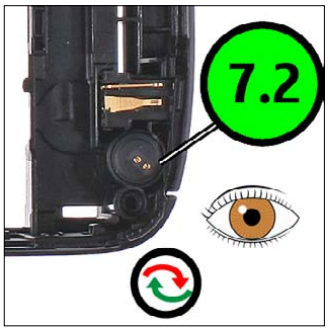
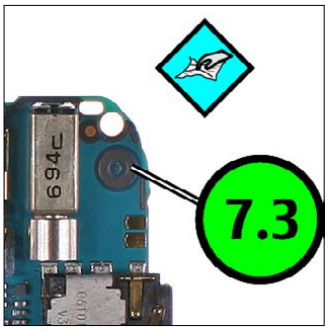
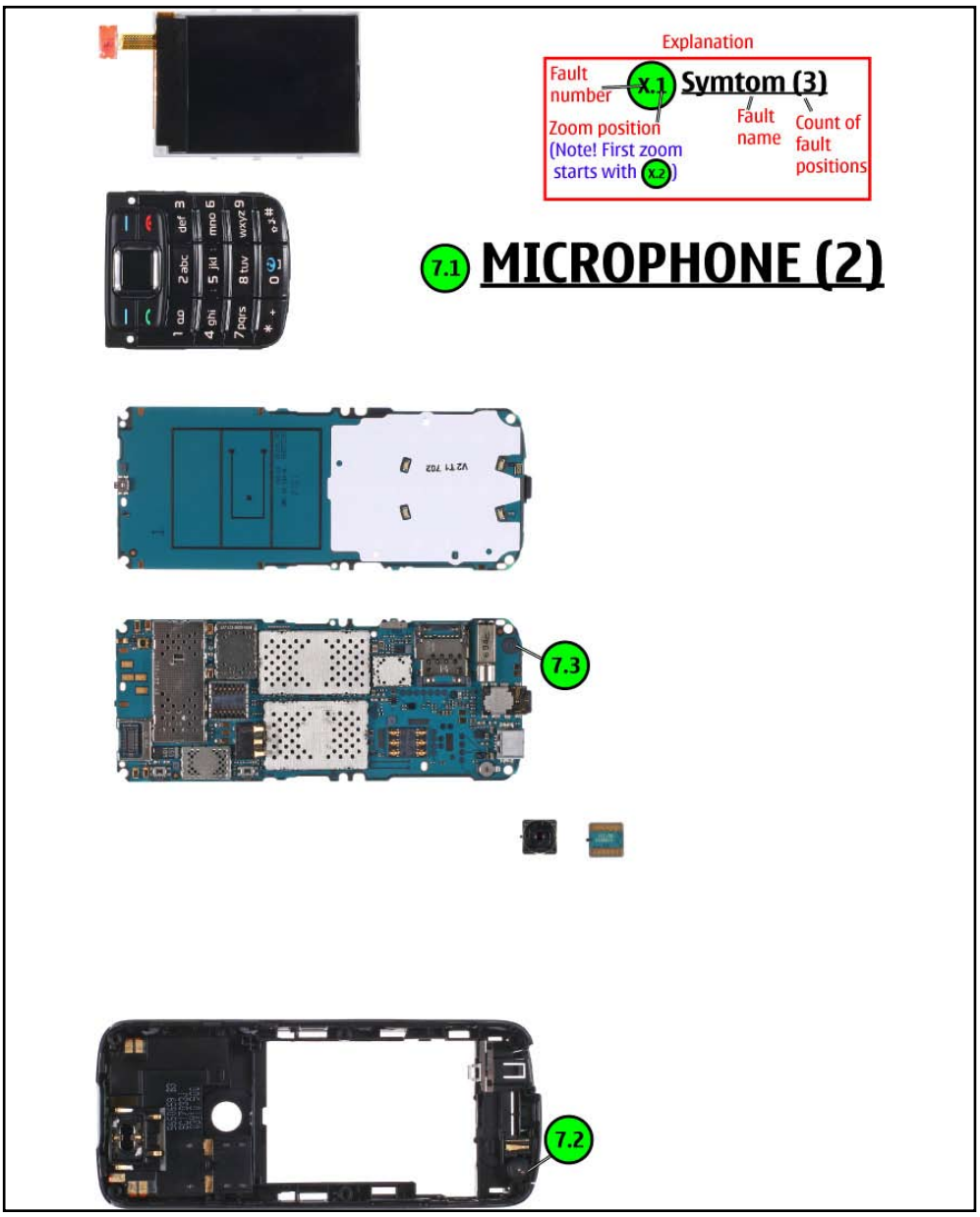
21. QUICK TROUBLE SHOOTER - MICROPHONE







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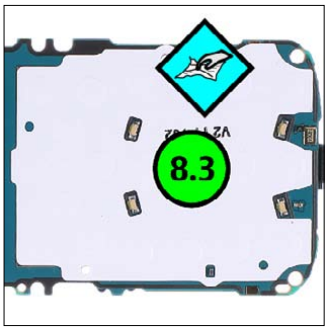
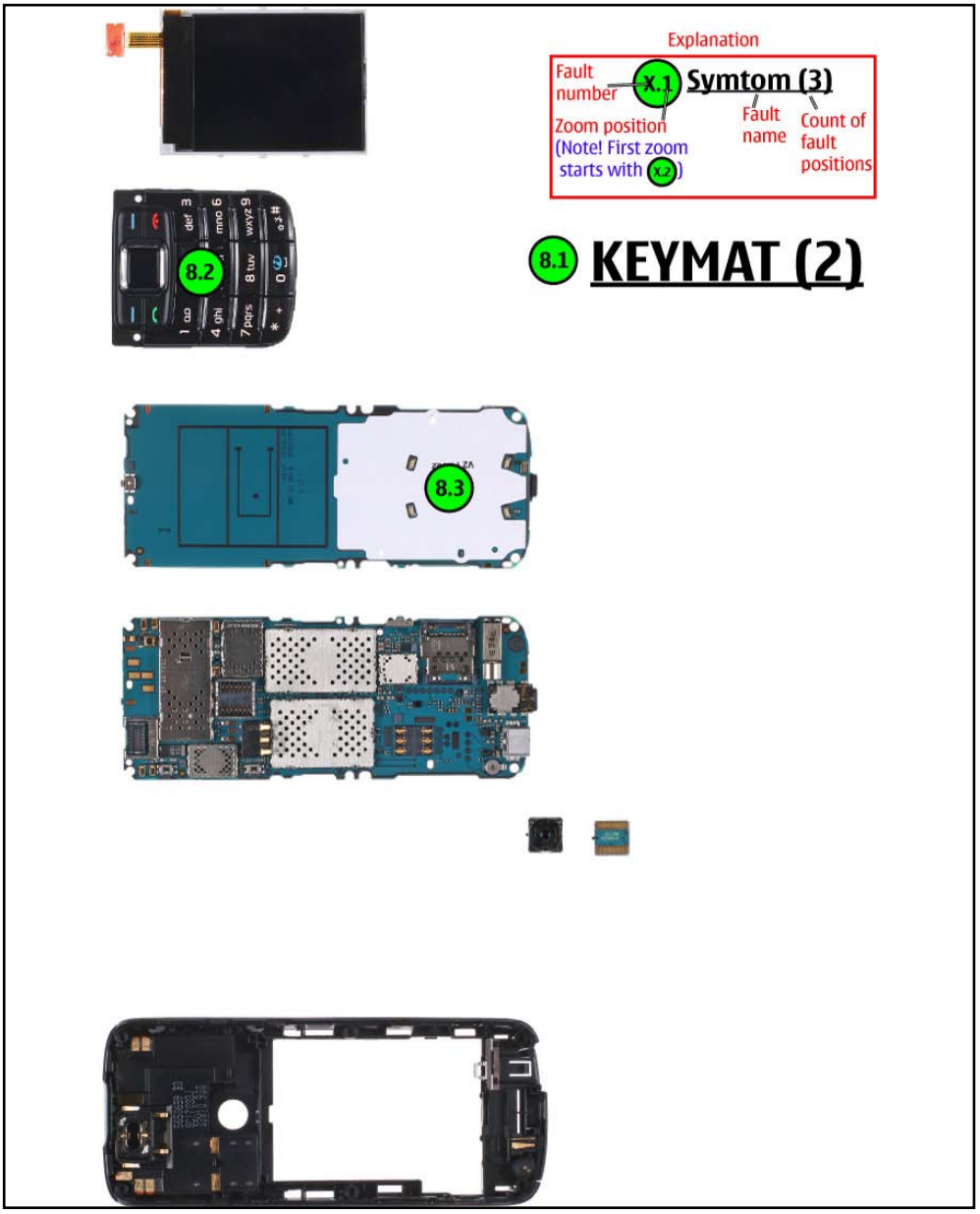
22. QUICK TROUBLE SHOOTER - KEYMAT





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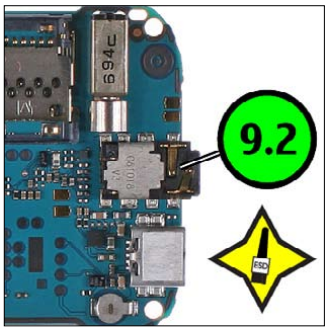
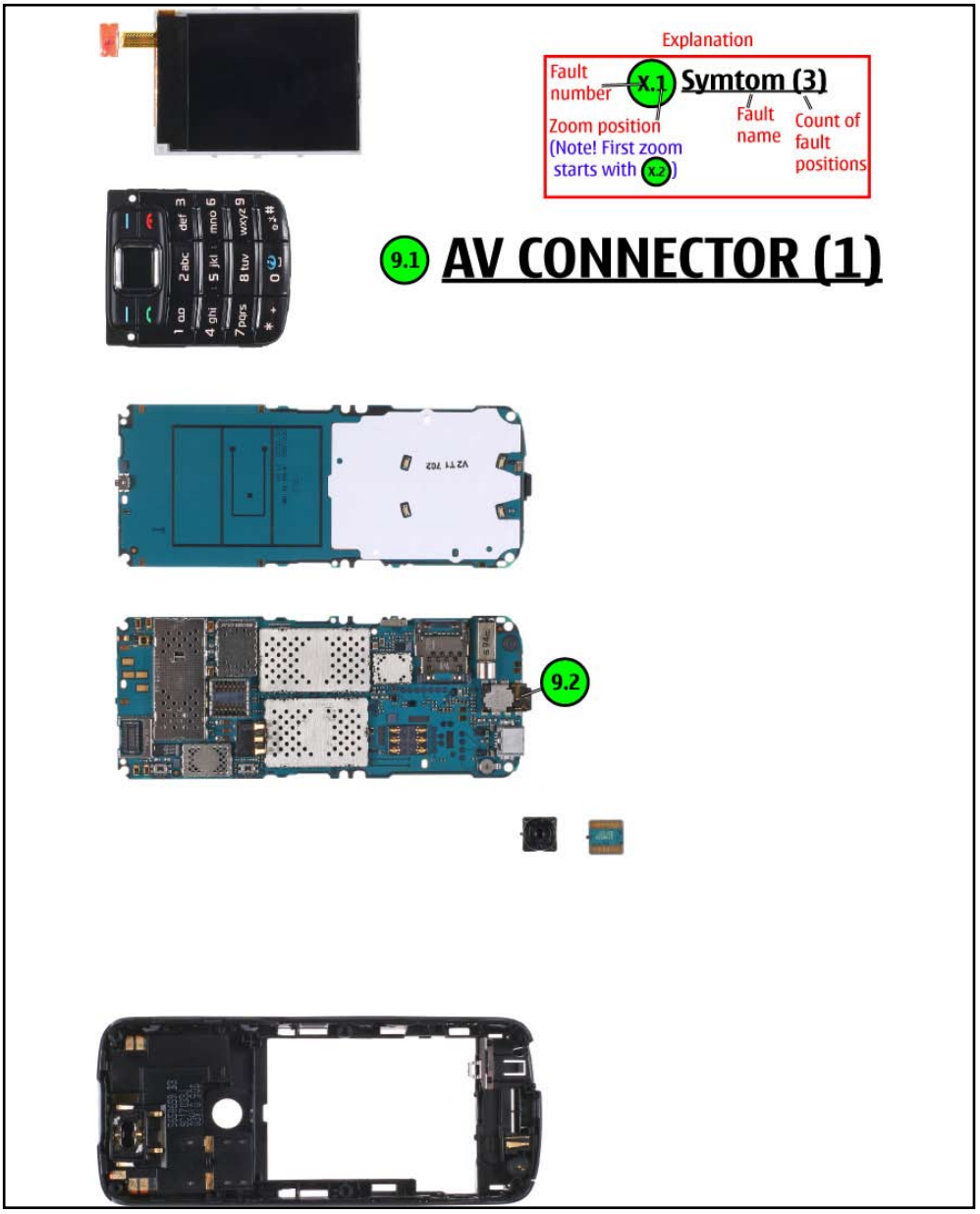
23. QUICK TROUBLE SHOOTER - AV CONNECTOR





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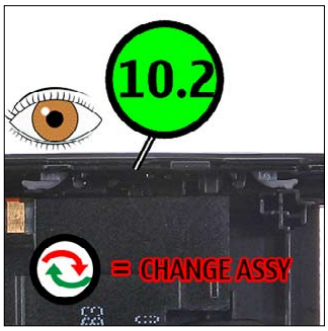
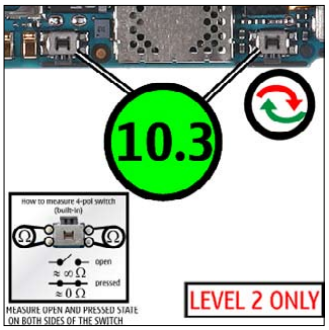
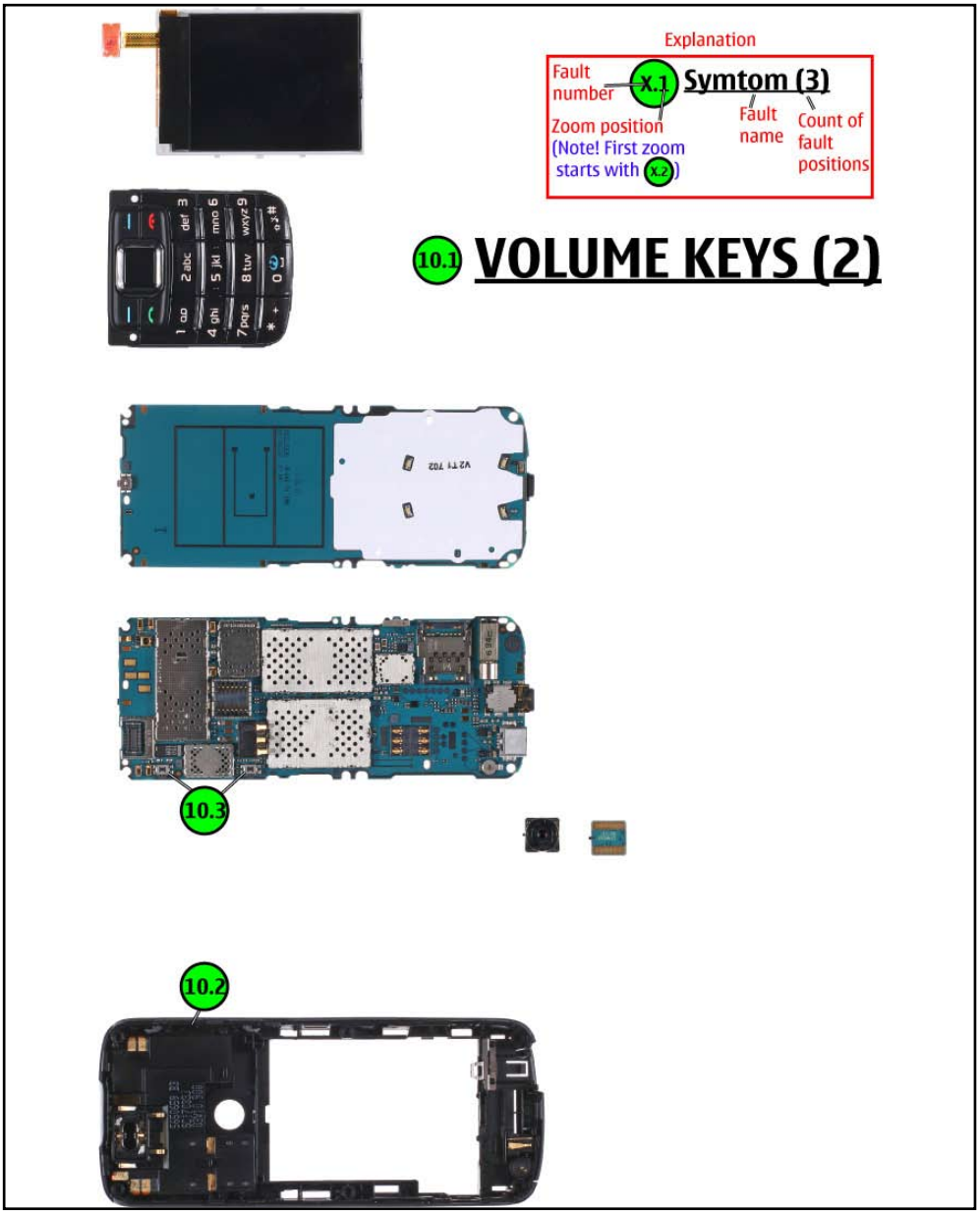
24. QUICK TROUBLE SHOOTER - VOLUME KEYS







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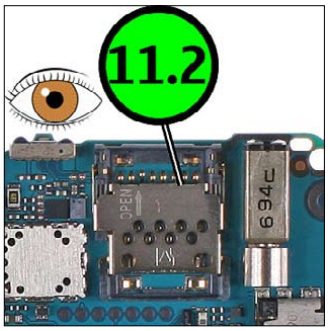
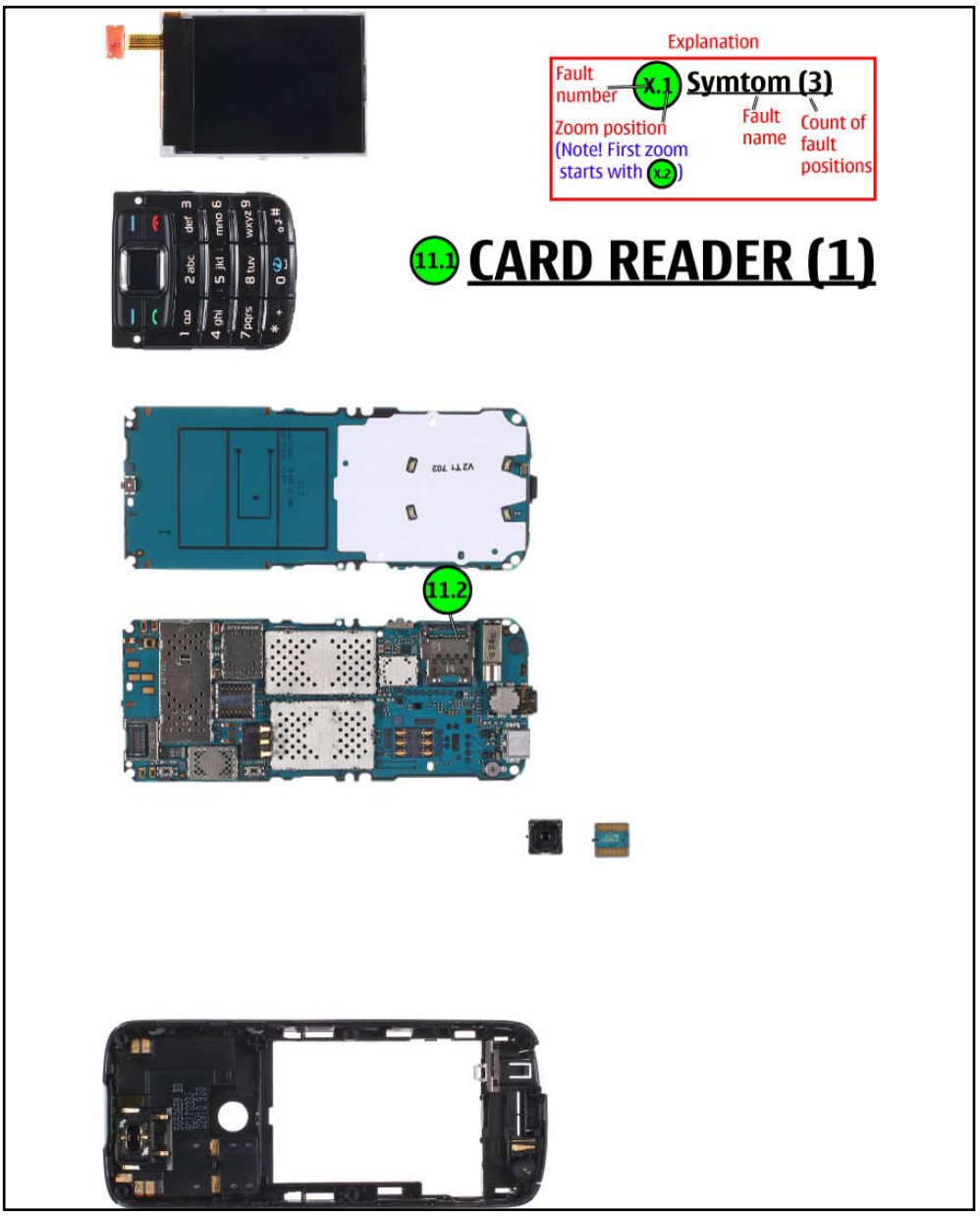
25. QUICK TROUBLE SHOOTER - CARD READER





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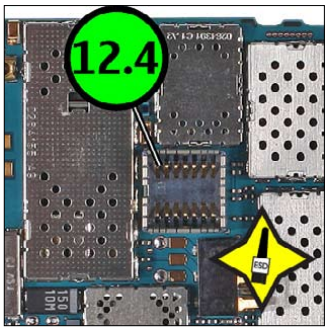
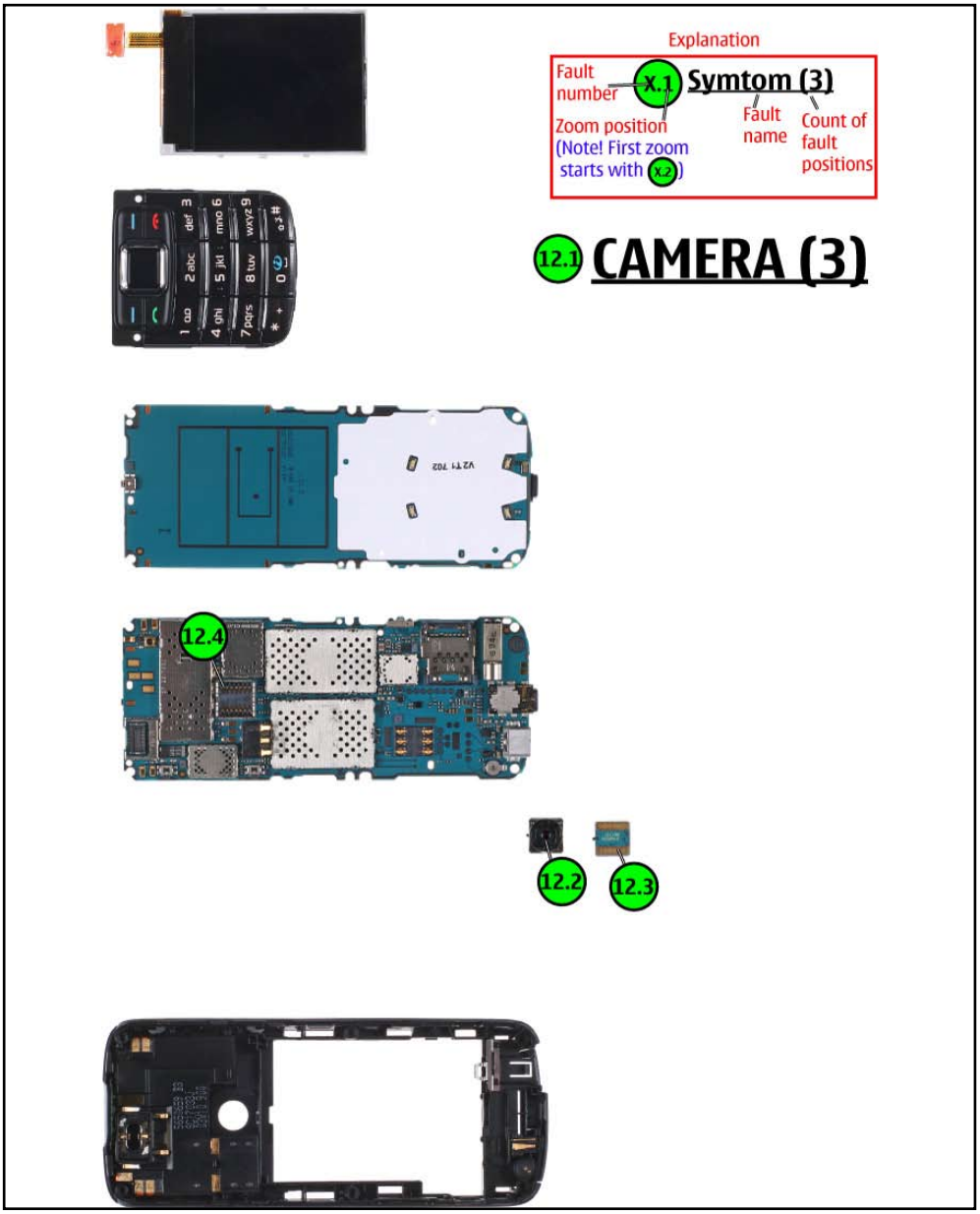
26. QUICK TROUBLE SHOOTER - CAMERA





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